ЖУРНАЛ
ТЕХНИЧЕСКОЙ ФИЗИКИ

АКАДЕМИИ НАУК СССР

SOVIET PHYSICS

Technical Physics

VOLUME 1 — INDEX

A Translation

of the

Journal of Technical Physics

of the

Academy of Sciences of the USSR

(RUSSIAN ORIGINAL VOLUME 26)

Published by the

AMERICAN INSTITUTE OF PHYSICS

INCORPORATED

SOVIET PHYSICS

Technical Physics

A translation of the "Journal of Technical Physics" of the USSR.

A publication of the

AMERICAN INSTITUTE OF PHYSICS

Governing Board

ALLEN V. ASTIN
WALTER S. BAIRD
JESSE W. BEAMS
HANS A. BETHE
RAYMOND T. BIRGE
RICHARD H. BOLT
FRANKLIN D. DEXTER
IRVINE C. GARDNER
SAMUEL A. GOUDSMIT
CHARLES KITTEL
HUGH S. KNOWLES
WINSTON E. KOCK
R. BRUCE LINDSAY
WILLIAM F. MEGGERS
WALTER C. MICHELS
R. RONALD PALMER
ROBERT F. PATON
JOSEPH B. PLATT
RALPH A. SAWYER
HENRY D. SMYTH
MARK W. ZEMANSKY

Officers and Staff

FREDERICK SEITZ
Chairman, Governing Board
ELMER HUTCHISSON
Director
HENRY A. BARTON
Associate Director
WALLACE WATERFALL
Executive Secretary
MARK W. ZEMANSKY
Treasurer
THEODORE VORBURGER
Advertising Manager
RUTH F. BRYANS
Publication Manager
KATHRYN SETZE
Assistant Treasurer
ALICE MASTROPIETRO
Circulation Manager
EUGENE H. KONE
Director of Public Relations

American Institute of Physics Advisory Board on Russian Translations

ROBERT T. BEYER, *Chairman*

FREEMAN DYSON, DWIGHT GRAY, MORTON HAMERMESH, VLADIMIR ROJANSKY

Advisory Editor, Soviet Physics—Technical Physics: MORTON HAMERMESH, Argonne National Laboratory, Lemont, Illinois.

"Soviet Physics—Technical Physics" is published by the American Institute of Physics for the purpose of making available in English reports of current Soviet research in physics as contained in the "Journal of Technical Physics" of the Academy of Sciences of the USSR. The translation began with the 1956 issues.

Transliteration of the names of Russian authors follows the system employed by the Library of Congress.

This translating and publishing project was undertaken by the Institute in the conviction that dissemination of the results of research everywhere in the world is invaluable to the advancement of science. The National Science Foundation of the United States encouraged the project initially and is supporting it in large part by a grant. Translation and printing are being handled by Consultants Bureau, Inc.

The American Institute of Physics and its translators propose to translate faithfully all of the scientific material in the "Journal of Technical Physics" of the Academy of Sciences of the USSR appearing after January 1, 1956. The views expressed in the translated material, therefore, are intended to be those expressed by the original authors, and not those of the translators nor of the American Institute of Physics.

One volume is published annually and Volume 2 will contain all of the scientific material published in the original Russian journal during the 1957 calendar year.

Subscription Prices:

Per Year	
United States and Canada	$90.00
Elsewhere	95.00
Back Numbers	
Single copies	$ 8.00

Subscriptions should be addressed to the American Institute of Physics, 335 East 45th Street, New York 17, New York.

Copyright by American Institute of Physics 1958

Soviet Physics—Technical Physics: Author Index for Vol. 1, 1956

(Russian Original Vol. 26, 1956, Journal of Technical Physics (USSR))

Ablova, M. S., O. D. Elpat'evskaia and A. R. Regel'. Electrical Conductivity of the Germanium Silicon Alloys in Liquid State - 1337.

Aerov, M. E. and N. N. Umnik. Heat and Mass Transfer in a Granular Layer. I - 1203.

— and N. N. Umnik. Heat and Mass Transfer in a Granular Layer. II - 1212.

— (see Gusev, I. V.) - 1942.

Afrosimov, V. V. (see Fedorenko, N. V.) - 1861, 1872.

Agarkova, V. N. (see Klinger, M. I.) - 2120.

Agishev, E. I. and N. I. Ionov. Pulsed Mass Spectroscope - 201.

Agranovskaia, A.I. (see Smolenskii, G.A.) - 467.

Akatnov, N. I. and Iu. L. Sabaitis. Measurement of Pitching Moment Derivatives by a Self-Excited Oscillation Method - 1986.

Aleksandrov, G. N. Initial Stages of Negative Point Corona - 2547.

— Physical Conditions for the Formation of an Alternating Current Corona Discharge - 1714.

— Physical Conditions for the Production of a DC Corona Discharge in Smooth Conductors - 2554.

Alekseev, V.P. (see Martynovskii, V. S.) - 2233.

Alekseeva, N. E. (see Iurkov, V.A.) - 898.

Alimov, R.Z. Heat Transfer By Transverse Flow of a Two-Phase Stream Over a Hot Cylindrical Tube - 1264.

Anastasevich, V.S. Theory of Compensation of Ion Beams - 1448.

Andrianov, K. A. and G.E. Golubkov. Electrical Properties and the Structure of Organo-Silicon Polymers - 1642.

Andrievskii, A. I. and M.T. Mishchenko. Diffusion of Copper and Oxygen Atoms in the Formation of Cuprous Oxide Films - 419.

Ankudinov, V.A. (see Fogel', Ia. M) - 1181.

Aptekar, I. L. and B. L. Timan. Dependence of the Coefficient of Electron Recombination on Temperature and Pressure - 337.

Bagirov, M. A. Speed of Formation of the Main Channel of a Long Spark in a Rod-Rod Gap -737.

Bak, M.A., K.A. Petrzhak and Iu. F. Romanov. Radiation from a Spherical Source When Self-Absorption Occurs - 372.

Baklagina, Iu. G. (see Rumsh, M.A.) - 1459.

Balygin, I.E. and A.I. Obraztsov. Dependence of Dielectric Losses in Ceramic Materials on Electric Field Strength - 1850.

— Breakdown of Ceramic Specimens When Subjected to High-Frequency Voltages and Various Temperatures - 2415.

— and K.S. Porovskii. Aging of Ceramic Insulation at High Temperatures - 1663.

Baranskii, P. I. (see Shtenbek, M.) - 659, 1345.

Barsukov, Iu. K. Differential Amplifier with Cathode Coupling for Pulse Operation. II. Correction of Transient Characteristics in the Differential Amplifier - 2000.

— Square Light Pulses From a Glow Discharge - 458.

Bartenev, G. M. and A. N. Bovkumenko, Various Factors which Affect the Strength of Glass Fibers - 2424.

— and S.V. Burov, Time Dependence of Strength of Rubber and Safe Loads - 2472.

Bashirov, R. I. and I. M. Tsidil'kovskii. Nernst-Ettingshausen Effect in Germanium - 2129.

Basil'ev, D.M. Method of X-Ray Study of Polycrystalline Specimens Possessing Texture - 671.

Batova, G. A. (see Deriagin, B. V.) - 873.

Bazhenov, N.M., M.V. Vol'kenshtein, Iu. Ia. Gotlib and L.D. Rozenshtein. Photoelastic Effect in Polystyrene and Its Halogen Derivatives - 1677.

Beguchev, O.P. Spreading of a Space Charge Cluster- 1443.

Belavtsev, E.M. (see Frimer, A.I.) - 530.

Ben'iaminovich, M.B. (see Veksler, V.I.) - 1626.

Berlaga, R.Ia., M.I. Rudenok and L.P. Strakhov. Surface Structure of Thin Layers of PbS Obtained by Vaporization in a Vacuum - 1.

Bessarab, N.F. Frictional Self-Excited Vibrations - 95.

Blazhnova, E. I., A. I. Mokrintseva, and V. I. Kasiianova. Luminophors for Color Television Based on ZnS · ZnSe - 2690.

Bliokh, P.V. and Ia. B. Fainberg. Charge-Density Waves in Variable-Speed Electron Beams - 510.

Bliumina, L. Kh. (see Fediaevskii, K. K.)- 594.

Bobovich, Ia. S. (see Pivovarov, V.M.) - 624.

Bobrikov, V.P. (see Stepanov, A.V.) - 777.

Bogdanov, S.V., B.M. Vul and R. Ia. Razbash. Influence of Conditions of Polarization on Piezo-Properties of Barium Titanate - 940.

— Steady-State Distribution of Excess Charge Carriers in Partially Illuminated Germanium - 903.

Bogomolov, V.N. Frequency-Changing Direct Current Amplifier, Which Uses the Change in the Resistance of a Semiconductor in a Magnetic Field - 2397.

— Some New Types of Devices Using Semiconductors (A New Application of the Hall Effect.) - 669.

Bogoroditskii, N.P. and I.D. Fridberg. Character of the Temperature Dependence of Dielectric Losses on Polarization of Ionic Compounds -1821.

– I. D. Fridberg and N.M. Tsvertkov. Question of Anomalous Polarization in Polycrystalline Titanium Dioxide - 1826.
Bokov, V.A. Behavior of Ferroelectrics in Strong Electron Fields- 1837.
Bol'shov, V.G. Thermionic Emission At the Solid-Liquid Transition Point -1123.
– and V.K. Seleznev. Secondary Electron Emission in Copper, Germanium and Tin in the Solid and Liquid States - 1612.
Boltaks, . B.I. Diffusion of Impurities in Germanium (Experimental Review) - 443.
Boltaks, B.I. and Iu. N. Mokhov. Diffusion of Lead in Lead Telluride - 2366.
Bonch-Bruevich, A.M. Transmission of Polarized Light Through a Medium With Standing Ultrasonic Waves - 428.
Bonch-Bruevich, V.L. Question of Surface Recombination - 1111.
– Remarks on the Article by G.E. Pikus and Iu. A. Firsov [1] - 1343.
Bonshtedt, B.E., T.G. Dmitrieva and I.I. Tsukkerman. Calculation of the Resolving Power of an Electron Optical Transformer with Homogeneous Fields - 1897.
Borishanskii, V.M. Equation Generalizing Experimental Data on the Cessation of Bubble Boiling in a Large Volume of Liquid - 438.
Borisova, T.I. (see Mikhailov, G.P.) - 1857.
Bovkumenko, A.N. (see Bartenev, G.M.) - 2424.
Breitbart, A.Ia. and I.L. Liudmirskii. Calculation of the Coupling Capacities Between Small Objects - 1069.
Bresler, S.E. and G.E. Pikus. Separation of Ions According to Their Mobilities - 102.
Broude, B.G. Use of the Gas-Hydraulic Analog for the Study of Gas Dynamics - 1538.
Bulyginskii, D.G. and D.N. Dobretsov. Electron Temperature in Oxide Cathodes - 957.
– Investigation of the Surface Work-Function Distribution for Oxide Cathodes -1115.
Bunkin, F.V. Periodic Remagnetization Noises in Ferromagnets - 1735.
– Statistical Nature of Remagnetization in Ferromagnets - 1727.
Burdak, N.M. (see Netushill, A.V.) - 1554.
Burov, S.V. (see Bartenev, G.M.) - 2472.
Butaeva, F.A. and V.A. Fabrikant. Studies with Luminescent Probes in the Region 500-1200A - 731.
Bykhorskii, A.I. Factors Which Influence the Transition From White to Gray Tin - 1746.
Bykova, G.A. (see Korsunskii, M.I) - 1192.
Chaban, M.M. (see Klinger, M.I.) - 921.
Chepur, D.V. and O.A. Red'ka. Effect of Temperature on the Photoconductivity of Polycrystalline Sheets of HgI_2 - 534.
Chernobyl'skii, I.I. and Iu. M. Tananaiko. Heat Exchange During Boiling of Liquids in Narrow Annular Tubes - 2244.
Chernov, A.P. Problem of the Effect of Solid Impurities on the Velocity of Motion of a Free Dust-Laden Stream-1038.
Chernyi, L. (see Tsigelka, L.) - 481.
Chernyshov, V.N. (see Iaroslavskii, M. I.) - 425.
Chirkin, V.S. and V.P. Iukin. Critical Point in Heat Removal From Boiling Water Flowing Through an Annular Gap - 1503.
Chormonov, T. Kh. Effect of Admixtures Upon the Permittivity and Piezoelectric Modulus of Rochelle Salt- 319.
Chovnik, A.A. (see Korsunskii, M. I.) - 1192.
Danilov, I.B. Problem of the Choice of Optimum Conditions for the Operation of a Helium Liquefier - 1023.
Davidovich, N.I., (see Rogovina, A.A.) - 2594.
Deriagin, B.V., P.S. Prokhorov, G.A. Batova and L.F. Leonov. Diffusion Hygrometer - 873.
– V.E. Push and D.M. Tolstoi, Theory of Stripping and Periodic Sticking of Solid Bodies (Friction Self-Oscillation of the First Kind) I. General Condition for Occurrence of Stickin - 1291.
Dianov, S.V. (see Vasil'ev. D.M.) - 2058.
Dmitrieva, T.G. (see Bonshtedt, B.E.) - 1897.
Dmitrochenko, D.A. (see Mikhailov, G.P.) - 1857.
Dobretsov, D.N. (see Bulyginskii, D.G.) - 957.
– (see Buylginskii, D.G.) - 1115.
Dokuchaev, N.F. Thermohygrometric Methods of Determining the Vapor Concentration in a Surface Layer - 2272.
Dorin, V.A. and D.N. Nasledov. Electron Microscope Investigation of the Sub-Electrode Layer of a Selenium Rectifier With a Cadmium Electrode - 279.
Dubinin, G.N. Nature of Surface Zones Which Arise When Chromium Diffuses in Iron - 1315.
Dubrovin, V.E. (see Malakhov, A.N.) - 1413.
Dubrovskii, G.B. (see Maslakovets, Iu. P.) - 2316.
Dunskii, V.F. Coagulation During the Atomization of a Liquid - 1232.
Dvornichenko, P.V. Certain Concepts Concerning the Procedure for Calculating Heat Exchange and Hydraulic Resistance of High-Velocity Gas Flow - 1531.
Dykman, I.M., E.I. Kaplunova and K.B. Tolpygo. Field Mass of Polarizing Excitons in Ionic Crystals - 2376.

Efendiev, G.A. Powder Patterns with Variable Radii - 621.
Ekertova, L. I. Additivity of Photoemission and Secondary Electron Emission of Metals - 1619.
Elinson, M. I. and G.F. Vasil'ev. Tantalum Field Emission - 1623.
Elpat'evskaia, O.D. and A. I. Regel', Certain Possibilities of Measuring the Magnetic Field Intensity by Means of Hall-EMF Film Detectors Made of HgSe, HgTe and Their Solid Solutions - 2350.
– R.A. Konikova, A.R. Regel' and I.V. Iavorskii. Stability of Crystal Structure in the Solid Solution System HgSe - HgTe - 2091.
– (see Ablova, M.S.) - 1337.
Ershov, V.N. and N.M. Ershova, Thermal Method for Determining the Moisture of Finely Dispersed Capillary Porous Materials - 1278.
Ershova, N.M. (see Ershov, V.N.) - 1278.
Evlashin, L.S. (see Vasil'ev, D.M.) - 1322.
Fabrikant, V.A. (see Butaeva, F.A.) - 731.
Fainberg, Ia. B. (see Bliokh, P.V.) - 510.
Fainerman, I.D. and L.M. Vaisman. Problem of the Variation in the Capacitance of a Pile of Capacitor Paper When it is Compressed - 2410.
Fainshtein, S.M. and V.I. Fistul'. Determination of Gaseous Micro Impurities in the Surface Layers of Germanium - 2099.
Fateev, N.P. (see Kolomoets, N.V.) - 662.
Fediaevskii, K.K. and L. Kh. Blumina. Vortical Trail of a Thick Wing of Finite Aspect Ratio Oscillating Harmonically with a Large Amplitude - 594.
Fedoseev, V.A. and D.I. Polishchuk. Evaporation of Drops of Combustible Liquids - 1470.
Fedorchenko, I.M. Factors Which Disturb Normal Shrinkage in The Sintering of Powdered Metals - 2006.
Fedorenko, N.V. and V.V. Afrosimov. Ionization of Gases by He^+, Ne^+ and A^+ Ions with the Production of Multiply-Charged Ions in Single Interactions - 1872.
– V. V. Afrosimov and D.M. Kaminker. Electron Capture and Ionization in the Interaction of Singly-Charged Positive Ions with Gas Atoms - 1861.
Fedorov, G.V. (see Orlov, A.N.) - 1926.
Fesenko, E.G. (see Khodakov, A.L.) - 2422.
Filippov, M.M. Behavior of the Space Charge in a Diode With an Axial Magnetic Field. II. Probe Method - 963.
Filipovich, V.N. Determination of Interatomic Distances From the Radial Distribution Curves of Scattered X-rays - 409.
– Theory of the Scattering of X-Rays at Small Angles - 391.
Filler, F.M. (see Vereshchagin, L.F.) - 2484.
Firsov, A.I. (see Vereshchagin, L.F.) - 2484.
Firsov, O.B. Positive Ion Current on the Electrodes of an Arc At Low Pressure - 431.
Fistul', V.I. (see Fainshtein, S.M.) - 2099.
Fogel', Ia. M. and L.I. Krupnik and V.A. Ankudinov, Formation of Negative Hydrogen Ions in Passage of Positive Hydrogen Ions Through an Ultrasonic Stream of Mercury Vapor - 1181.
– (see Korsunskii, M.I.) - 1192.
Fradkin, B.M. Ferromagnetic Sphere in a Strong Field - 1026.
Frankevich, E. L. (see Tal'rose, V. L.) - 479.
Frid, A.A. (see Kliarfel's, B.N.) - 2456.
Fridberg, I.D. (see Bogoroditskii, N. P.) - 1821. 1826.
Frimer, A.I. and A.M. Gerasimova. Electron-Microscopic Investigation of the Structure of Photoelectric Cathodes - 705.
– E.M. Belavtseva, A.M. Gerasimova. Electron - Microscope Investigation of the Structure of a Gaseous Discharge - 530.
Gabovich, M.M. and E.T. Kucherenko, Effect of Plasma Penetration on the Focusing of an Ion Beam - 975.
Galaktionov, V.A. (see Vereshchagin, L.F.) - 2484.
Galkin, G.N. (see Vavilov, V.S.) - 1805.
Gaponov, A.V. and M.A. Miller, Integral Equation for Currents in the Theory of Metal Antennas - 2674.
Gerasimova, A.M. (see Frimer, A.I.) - 530, 705.
German, V. I. and A.S. Kompaneets. Theory of a Buncher - 654.
Glinchuk, K.D., E.G. Miseliuk, and E. I. Rashba. Measurement of Rate of Recombination of Carriers by Conductivity Modulation - 2521.
Gokhberg, B.M. (see Gorlov, G.V.) - 964.
Golovinskii, G. P. Condensation of Vapor Mixtures in Deep Cooling - 1281.
Golubkov, G.E. (see Andrianov, K.A.) - 1642.
Gorazdovskii, T. Ia. and S. A. Regirer. Motion of Newtonian Liquid Between Rotating Coaxial Cylinders in the Presence of Thermal Processes Affecting the Viscous Properties - 1493.
Goregor'ev, M. N. and I.M. Kirko. Investigation of the Magnetization of a Structure for Modelling of Magnetodielectrics - 1463.
Gorlunova, N.A. and V.S. Grigor'eva. Arsenoselenides of Gallium - 2094.

– B.T. Kolomiets and A.A. Mal'kova. Properties and Structure of Ternary Semiconductive Systems. III. Conductivity and Photoconductivity in Systems of Sulfides of Thallium, Antimony and Bismuth - 1583.
Gorlov, G.V., B.M. Gokhberg, V.M. Morozov and V.A. Shigin. Angular Distribution of Neutrons in the Reaction T (p,n) He^3 - 964.
Gornii, N.V. Deformation of Secondary Emission Volt-Ampere Curves at Positive Collector Potentials - 702.
Gotlib, Iu. Ia. (see Bazhenov, N.M.) - 1677.
Granovskii, V.L. (see Rosanova, N.B.) – 471.
Grigor'eva, V.S. (see Goriunova, N.S.) - 2094.
Grim, V.R. and D.N. Nasledov. Investigation of the Rectifying Properties of Selenium-Tin-Sulfide or Selenium-Tin Selenide Electron-Hole Transition- 687.
Grois, O. Sh. (see Shpinel', V.S.) - 2191.
Gross, E.F., A.A. Kaplianskii and B.V. Novikov. Photoconductivity and the Emission and Absorption of Light in Crystals of HgI_2 - 674.
– A.A. Kaplianskii and B.V. Novikov. Structure of the Spectral Curve for the Internal Photoeffect in Crystals of Cadmium Sulfide - 900.
– B.P. Zakharchenia and N.M. Reinov. Zeeman Effect in the Yellow Series of the Exciton in a Crystal of Cuprous Oxide - 677.
– and M.A. Iakobson, Radiation Spectrum of the Exciton - 1340.
– and V.V. Sobolev. Adsorption Spectrum and a Study of Excitons in Cadmium Selenide Crystals - 1580
Gubanov, A.I. Length of the Free Path of the Electron in Liquid and Amorphous Conductors - 1605.
– Theory of $A^{III}B^{V}$ - Type Semiconductors - 2107.
Gurevich, M.A. and B.F. Ormont. Precision Determination of Polycrystal Lattice Parameters With a Back-Reflection X-Ray Camera of High Resolving Power - 1081.
Gurvich, L.G. (see Umarov, S.U.) - 2115.
Gusa, V. (see Tsigelka, I.) - 481.
Gusev, I.V., N. I. Nikitina and M.E. Aerov. Heat and Mass Transfer in a Granular Layer. III. Determination of the Mass Transfer Coefficients in a Moving Granular Layer - 1942.
Gutin, S.S. L.L. Prochakov, and M.G. Servulenko. Measuring the True Surface of a Metal - 851.
Iakobson, M.A. (see Gross, E.F.) - 1340.
Iakovchuk, N.S. (see Stafeev, V.I.) - 11.
Iarkho, I.S. (see Reitlinger, S.A.)– 2467.
Iaroslavskii, M.I., R.M. Liutenberg and V. N. Chernyshov. Instrument for Studying the Piezoelectric Properties of Crystals - 425.
Iaskolko, V. Ia. (see Nosenko, B.M.) - 1983.
Iavorskii, I.V. (see Elpat'evskaia, O.D.) - 2091.
Indenbom, V. L. Surface Stresses in Glassware - 362.
Ioffe, A.F. Two New Applications of the Peltier Effect - 462.
Ioffe, V.A. Dielectric Losses in Boron-Alkali Glasses at Low Temperatures - 498.
Ionov, N.I. Surface Ionization of Molecules of Potassium Chloride and Cesium Chloride in an Electric Field - 2134.
– (see Agishev, E.I.) - 201.
Iordanishvili, E.K. and L.S. Stil'bans. Thermoelectric Microcoolers - 928.
– and L.S. Stil'bans. Thermoelectric Microrefrigerators - 466.
Ishkin, I. P. and M.G. Kaganer. Investigation of the Thermodynamical Properties of Air and Nitrogen at High Pressures and Low Temperatures. I. The Isothermal Joule-Thomson Effect for Air and Nitrogen - 2255.
– and M.G. Kaganer. Investigation of the Thermodynamical Properties of Air and Nitrogen at High Pressures and Low Temperatures. II. Thermodynamical Phase Diagrams of Air and Nitrogen - 2263.
Isupov, V. A. Question of Causes of Formation of a Curie Range of Temperatures in Certain Ferroelectric Solid Solutions - 1846.
Iukin, V.P. (see Chirkin, V.S.) - 1503.
Iurkov, V.A. and N.E. Alekseeva. Thermoelectric Properties of Cd-Sb Alloys - 898.
Iurov, S. G. (see Khazanov, V. S.) - 1141.
Ivanov, A.P. and A.S. Toporets. Investigation of Diffuse Reflection by Means of Polarized Light- 598.
– and A.S. Toporets. Investigation of Diffuse Reflection by Means of Polarized Light. II - 605.
Ivanov, G.A. and L.I. Mokievskii, Thermoelectric Properties of Bismuth - 1313.
Ivanov, L.I. and V.I. Pruzhinina-Granovskaia. Effect of Admixtures Upon the Electrical Conductivity and Non-Linearity of Carborundums- 216.
Ivanov, V.I. (see Vereshchagin, L. F.) - 860.
Ivanovskaia, I.L. and A.G. Novikov. Large Rectangular Wilson Chamber - 206.
Kabin, S.P., Dynamic Mechanical Properties of Polyethylene and Polytetrafluoroethylene - 2542.
– and G.P. Mikhailov. Mechanical and Electrical Losses of Polyisobutylene- 493.
Kaganer, M.G. (see Ishkin, I.P.) 2255, 2263.

Kaganov, M.A. Problem of Utilizing the Method of an "Instantaneous" Heat Source for Determining the Thermal Characteristics of Heat Insulators - 650.

Kalashnikov, Ia. A. and L.F. Vereshchagin. Measurement of Temperature at High Pressure by Radiation and Certain Optical Effects in Gases - 1749.

Kalashnikov, S.G. Recombination of Electrons and Holes When Various Types of Traps Are Present- 237.

Kaminker, D.M. (see Fedorenko, N.V.) - 1861.

Kaplianskii, A.A. (see Gross, E.F.) - 674, 900.

Kaplunova, E.I. and K.B. Tolpygo. Kinetics of Bipolar Photoelectromotive Force in a Semiconductor with Metallic Electrodes - 2102.

– (see Dykman, I.M.) - 2376.

Kargin, V.A., (see Rogovina, A.A.) - 2594, 2599.

Kashkarov, V.P. (see Vulis, L.A.) - 2612.

Kashtanova, A.M. (see Skanavi, G.I.) 882.

Kasiianova, V.I. (see Blazhnova, E.I.) - 2690.

Kats, M. Ia., G.M. Kukavadze, and R.L. Serdiuk. Enrichment of Boron with the Isotope B^{10} - 2654.

Kevroleva, K. M. Dielectric Strength of Rochelle Salt Crystals when they are Subjected to a DC Voltage, and AC Voltage (50 CPS) and to a Pulse Voltage with a Duration of 10^{-4}- 10^{-7}sec.- 2175.

Khalilov, A. Iu. (see Nasledov, D.N.) - 3.

Khalivo, A.Iu. (see Nasledov, D.N.) - 248.

Khansevarov, R. Yu. (see Ryvkin, S.M.) - 2688.

Khavkin, L.P. Theory of the Ionization Gauge - 2279.

Khazanov, V.S. and S.G. Iurov. Constancy of the Spectral Characteristics of Oxygen-Cesium and Antimony-Cesium Vacuum Photocells - 1141.

Khazanova, N.E. and I.P. Krichevskii. Formation at High Pressures - 413.

Khodakov, A.L. Nonlinear Properties of Ferroelectrics in the Presence of Large Field Intensities - 47.

– (see Novosil'tsev, N.S.) - 306.

– M.L. Sholokhovich, E.G. Fesenko, and O.P. Kramarov. Monocrystals of Strontium Titanate - 2422.

Kirko, I.M. (see Greogr'ev. M.N.) - 1463.

Kliarfel's, B.N. and A.A. Frid. Filamentary Anode in a Gaseous Discharge - 2456.

Klinger, M. I. and M.M. Chaban. Problem of the Faraday Effect in Semiconductors - 921.

– V. G. Novikova and V.N. Agarkova. Theory of the Hall and Nerst Effects in Semiconductors with Impurity Zones - 2120.

Kogan, M.G. Nonstationary Heat Conduction in Solids Bounded by Orthogonal Coordinate Surfaces. II. Temperature Fields that Depend on a Single Coordinate - 1486.

– Transient Heat Conduction in Solid Bodies Bounded by Orthogonal Coordinate Surfaces. 1. Three-Dimensional Temperature Field -1155.

Kogarko, S.M. (see Zel'dovich, Ia. B.) - 1689.

Koikov, S.N. and A.N. Tsikin. Dielectric Strength of Thin Layers of Aluminum Oxide - 2180.

Kolesnikov, A.P. (see Korenblit, L.L.) - 924.

Kolomenskii, A.A. Elimination of Critical Energy in Strong-focusing Synchrotrons- 721.

– and L.L. Sabsovich. Passage Through the Critical Energy Point in an Accelerator with Intense Focusing - 555.

– Theory of Betatron Oscillations of Particles in Magnetic Systems. I. - 1900.

– Theory of Betatron Oscillations of Particles in Magnetic Systems. II. - 1911.

Kolomiets, B.T. (see Goriunova, N.A.) - 1583.

Kolomoets, N.V., M. S. Stamzas, L. S. Stil'bans, and N.P. Fateev. Measurement of the Humidity of the Air by Means of Semiconducting Thermocouples - 662.

Kompaneets, A.A. (see German, V.I.) - 654.

Konikova, R.A. (see Elpat'evskaia, O.D.) - 2091.

Konobeevskii, S.T., B.M. Levitskii and Iu. A. Martyniuk - New Method for the X-Ray Investigation of the Structure of Radioactive Materials - 856.

Konorov, P.P., Electrical Properties of Compounds of Bismuth With Elements of the S-Se-Te Group. 1) Electrical Properties of Bismuth Sulfide, Bi_2S_3. - 1100.

– Electrical Properties of Bismuth Chalcogens. II. Electrical Properties of Bismuth Selenide Bi_2Se_3 - 1365.

– Electrical Properties of Bismuth Chalcogens. III. Electrical Properties of Bismuth Telluride (Bi_2Te_3) - 1371.

Konovalov, P.F. (see Vasenin, F.I.) - 1376.

Kontorova, T.A. Problem of the Rational Determination of the Mobility of Current Carriers in Semiconductors - 646.

– Thermal Expansion and Thermal Conductivity of Some Crystals - 1959.

Kopets, Z., Problem of the Effective Mass of Electrons and Holes in Germanium - 2369.

Korenblit, L.L. and A.A. Shteinberg. Graphical Method of Determination of the Chemical Potential [Fermi Level] of Semiconductors - 912.

– and A.P. Kolesnikov. Magnetic Properties of Mg_2Sn- 924.
Kornfel'd, M. Resolving Power of the Eye - 434.
Kornfeld, M. and V.L. Triers. Swelling of a Liquid Surface Under the Influence of Ultrasound - 2685.
Korsunskii, M.I, and Ia. M. Fogel'; G.A. Bykova, L.I. Livshits, N.S. Lozovskii and A.A. Chovnik. Study of the Topography of the Inhomogeneous Plane Magnetic Field of a Six-Pole Electromagnet- 1192.
Kosman, M.S. and A.N. Shervardin. Upper Curie Point of Rochelle [Seignette] Salt - 1407.
Kosov, N.D. (see Vulis, L.A.) - 78.
Koton, M.M. Properties of Plastic Scintillation Phosphors - 1687.
Kotova, I. P. (see Pokrovskii, E.I.) - 1417.
Kovalchik, T.L. and Iu. P. Maslakovets. Effect of Impurities on the Electrical Properties of Lead Telluride - 2337.
Kozlovskii, V. Kh. Dynamic Theory of the Ionic Lattices of Ferroelectric Crystals Under Static Conditions - 944.
– Question of Dielectric Losses in Solid Amorphous Structures. - 2186.
Kozyrev, P.T. Isothermal Time Variations of the Electrical Conductivity of Polycrystalline Selenium After Abrupt Temperature Variations- 252.
– Isothermal Time Variations of the Concentration of Current Carriers and of the Electrical Conductivity of Polycrystalline Selenium After Abrupt Temperature Variations - II - 262.
Kramarov, O.P. (see Khodakov, A.L.) - 2422.
Krasner, L.V. (see Mikhailov, G.P.) - 1684.
Krichevskii, L.P. (see Khazanova, N.E.) - 413.
Kristi, N.M. (see Mints, A.L.) - 1760.
Krupnik, L.I. (see Fogel', Ia. M.) - 1181.
Krzhizh, I. (see Tsigelka, L.)-481.
Kubanskii, P.N. Effect of Intensity of Oscillation on the Form of Acoustical Streaming - 1240.
Kucherenko, E.T. (see Gabovich, M.M.) - 975.
Kuchin, V.D. (see Vorob'ev, A.A.) - 2431.
Kukavadze, G.M. (see Kats, M.Ia.) - 2654.
Kukekov, G.A., Voltage Current Characteristics of an Electric Arc Cooled in a Slit Canal - 2463.
Kuvshinskii, E.V. and E.A. Sidorovich. Pendulum Elastometer of the "KS" Type - 863.
Kuz'min, D.V. Dipole Moments of Dielectric and Semiconducting Particles - 1817.
Kuznetzov, B.A. Study of Fatigue in Silver Chloride by an Optical Method - 1010.
– Study of Stresses in Silver Chloride Crystals when They are Subjected to Elastic-Plastic Inflection- 1570.
Ladnar, I.(see Tsigelka, I.) - 481.
Lapitskii, Iu. Ia., I.I. Levintov, I. N. Slivkov and V.N. Shamshev - 714.
Lavrent'ev, V.V. (see Ratner, S.B.) - 839.
Lebedev, A.A., V.I. Stafaev and V.M. Tuchkevich. Some Properties of Gold-Doped Germanium Diodes - 2071.
Lebedeva, V.K. Evaporation of Liquid Through Communicating Capillaries and the Fundamental Law of Transfer of Moisture in a Capillary-Porous Solid - 1042.
Leonov, L.F. (see Deriagin, B.V.) - 873.
Levintov, I.I. (see Lapitskii, Iu. Ia.) - 714.
Levitskii, B.M. (see Konobeevskii. S.T.)-856.
Liast, I. Ts. Mechanism of Relaxation Dielectric Losses in Crystals with Polar Molecules - 2223.
Likhachev, Iu. I. Causes of Large Platic Deformations in the Stretching of Metal Samples with Annular Grooves - 1785.
Likhter, A.I. (see Vereshchagin, L.F.) - 860.
Liudmirskii, I.L. (see Breitbart, A. Ia.) - 1069.
Liulichev, A.N. (see Palatnik, L.S.) - 818, 825.
Liutenberg, R.M.(see Iaroslavskii, M. I.) - 425.
Livshits, L.I. (see Korsunskii, M. I.) - 1192.
Lobanova, N.V. (see Rautian, G.N.) - 193.
Lomakin, G.D. External Dry Friction When the Frictional Body Oscillates as a Whole - 843.
Loshakov, L.N. Calculation of Approximate Transmission-Line Propagation Constants in the Presence of an Electron Beam - 792.
Lozovskii, N.S. (see Korsunskii, M.I.) - 1192.
L'vova, E.M. and G.S. Moroz. Integral Absorption Coefficient of Solar Radiation for Certain Materials and Coatings - 836.
Lur'e, M.S. and A.I. Medovoi. Effect of Mechanical Pressure Applied to One Side of Ceramic Ferroelectrics on Their Permittivity - 1403.
Makhlis, A.I. and V.M. Makushenko. Electronic Method for Converting Functional Scales - 231.
– and V.M. Makushenko. Method of Amplifying Constant Voltages - 460.
Makovetskii, P.V., Oscillations in Photoelectric Cells and Photomultipliers - 2566.
Makushenko, V.M. (see Makhlis, A.I.)-231,460.
Malakhov, A.N. and V.E. Dubrovin. Some Investigations of the Flicker Effect - 1413.
Mal'kova, A.A. (see Goriunova, N.A.) - 1583.
Mal'tsev, Iu. V. (see Veinberg, V.B.) -2295.
Mamyrin, B.A. Measurement of Periodic Voltage and Current Pulses of Limitingly Small Magnitude - 627.
Mandel'shtam, M. Ia. Reverse Current in a Spherical Condenser Type Apparatus - 2167.

Margolin, G.I. (see Vasil'ev, D.M.) - 2058.
Martyniuk, Iu. A. (see Konobeevskii, S.T.)-856.
Martynovskii, V.S. and V.P. Alekseev. Investigation of the Vortex Thermal Separation Effect for Gases and Vapors - 2233.
Maslakovets, Iu. P., S.A. Poltinnikov, G.B. Dubrovskii and V.K. Subashiev. p-Type Silicon Converters of Solar Energy - 2316.
– (see Kovalchik, T.L.) - 2337.
Maslennikova, A.A. (see Reitlinger, S.A.)-2467.
Maslenikova, N.S. (see Shalabutov, Iu. K.)- 1137.
Matskevich, D.D. Multi-Link Mechanical Filters - 1088.
Medovoi A.I. (see Lur'e, M.S.) - 1403.
Merkulov, A.P. Investigation of a Vortex Tube - 1243.
Merkulov, L.G. Investigation of Ultrasonic Scattering in Metals - 59.
Miakinin, E.I.(see Shul'man, A.R.) - 2157.
Mikhailov, G.P., T.I. Borisova and D.A. Dmitrochenko. Dielectric Relaxation Losses in Polymethylmethacrylate - 1857.
Mikhalevskii, V.S. and D.N. Venerovskii. Generation of Electromagnetic Waves by Means of a Traveling-Wave Tube with an External Sectioned Helix - 506.
Mikhailov, G.P. and B.I. Sazhin. Investigation of the Dielectric Polarization and Losses of Polytrifluorochlorethylene - 1670.
– and L.V. Krasner. Study by the Method of Dielectric Losses of the Dependence on Concentration of the Relaxation Time in Copolymers - 1684.
– (see Kabin, S.P.) 493.
Miller, M.A. and V.I. Talanov. Electromagnetic Surface Waves Guided by Small-Curvature Boundaries - 2665.
– (see Gaponov, A.V.) - 2674.
Mints, A. L. and N.M. Kristi. Certain Features of Dynamic Vacuum Systems - 1760.
Miseliuk, E.G. (see Glinchuk, K.D.) - 2521.
Mishchenko, M.T. (see Andrievskii, A.I.) - 419.
Mitkevich, S.P. (see Nekrashevich, I.G.) -83.
Miuller, R.L. Electrical Conductivity of Solid Ionic and Atom-Valent Substances. VIII. Concentration Dependence of Electrical Conductivity in Boric And Silicate Glasses - 2529.
Mochalov, K.N. and E.L. Raff. Role Played by the Surrounding Medium in the Excitation of Atomic Spectra in an Arc Discharge - 487.
Moizhes, B. Ia. Electron Trajectories in a Static Magnetron - 1780.
Mokhov, Iu. N. (see Boltaks, B.I.) - 2366.
Mokievskii, L.I. (see Ivanov, G.A.) - 1313.
Mokrintseva, A.I. (Blazhnova, E.I.) - 2690.
Mologin, M.A. Wave Motion on Layered Flow Surface in Horizontal Pipes - 1768.
Morgulis, M.D. Physical Properties of a Porous Metallic-Film Thermionic Cathode - 517.
Morgulis, N.D. and G. Ia. Pikus. Mass Spectrometric Investigation of the Activation Process in Oxide Cathodes - 1144.
Moroz, G.S. (see L'vova, E.M.) - 836.
Morozov, V.G. (see Sterman, L.S.) - 2250.
Morozov, V.M. (see Goriov, G.V.) - 964.
Moskalev, V.A., Spatial Distribution of Radiation from a 10 Mev Betatron -2508.
– Stereobetatron - 1998.
Nasledov, D.N. and A. Iu. Khalilov. Electrical Properties of InSb - 3.
– and A. Iu. Khalilov. Electrical Properties of InAs - 248.
– (see Dorin, V.A.) - 279.
– (see Grimm, V.R.) - 687.
Nebylitsyn, B.F. (see Rogovina, A.A.) - 2594.
Nechai, F. Possibility of Measuring the Refractive Index of a Crystalline Body With an Abbe Refractometer - 423.
Nedospasov, A.V. Theory of the Low Voltage Arc Region - 1174.
Neizvestnyi, I.G. (see Rzhanov, A.V.) - 2081.
Nekhendzi, E. Iu. Analysis of the "Double-Biot Number Method" of Determining the Thermal Constants of Metals and Insulators - 1798.
Nekrashevich, I.G. and S.P. Mitkevich. Some Regularities of the Phenomena of Electric Erosion of Metals in Low-Voltage Discharges in Liquid - 83.
– Operation of Selenium Rectifiers at Audio Frequencies - 540.
Nemilov, Iu. A. and V.E. Privalova. Antimony-Lithium Photocathode - 56.
Novikov, A.G. (see Ivanovskaia, I.L.) - 206.
Netushil, A.V. and N.M. Burdak. Model for Electroosmotic Water Level Depression - 1554.
Neustruev, A.A. Determination of the Time Necessary to Heat Long Articles in Convection Furnaces - 1516.
Nikitina, N.I. (see Gusev, I.V.) - 1942.
Nikitin, V.V. (see Rogovina, A.A.) - 2594.
Nosenko, B.M., L.S. Revzin and V. Ia. Iaskolko. Use of $CaSO_4 \cdot Mn$ for Dosimetry - 1983.
Novik, D.A. Method of Compression of the Bandwidth Required for a Television Channel - 886.
Novikov, B. V. (see Gross, E.F.) - 674, 900.
Novikova, V. G. (see Klinger, M. I.) - 2120.
Novosil'tsev, N. S. and A.L. Khodakov. Dielectric Properties of Several Solid Solutions Which Contain Barium Titanate - 306.

Obraztsov, A.I. (see Balygin, I.E.) - 1850.
Odelevskii, V. I. (see Verebeichik, N.M.) - 1647, 1654.
Onosovskii, V.V. (see Rosenfel'd, L.M.) - 1975.
Orlov, A.N. and G.V. Fedorov. Absorption of Betatron Bremsstrahlung by a Double Layer Absorber - 1926.
Orlov, S.I. Concerning the Theory of Nonuniform Transmission Lines - 2284.
Ormont, B.F. (see Gurevich, M.A.) - 1081.
Ostroumov, A.G. and G.A. Ostroumov. Thermoelectric Convention - 610.
– (see Ostroumov, A.G.) - 610.
– Unsteady Heat Convenction Near a Horizontal Cylinder - 2627.
Palatnik, L.S. and A.N. Liulichev. Application of Spectral Analysis in Investigation of Vapor Phase Produced in Electric Spark Treatment of Metals - 825.
– and A.N. Liulichev. Investigation of the Temperature in the Vapor Phase Occurring During the Electrical Spark Treatment of Metals - 818.
Patrushev, V.L. Application of the Method of Curvilinear Coordinates to The Design of a II-Shaped (reentrant)Resonator - 806.
Patskevich, V.M. (see Vavilov, V.S.) - 1805.
Peshkov, V.P. Calculation of the Parameters of a Rectification Column - 639.
Petrzhak, K.A. (see Bak, M.A.) - 372.
Pikus, G.E. Thermo- and Galvanomagnetic Effects in Semiconductors, Taking Into Account The Variation in the Concentration of Current Carriers. I. Thermo- and Galvanomagnetic Effects in Weak Fields- 17.
– Thermo- and Galvanomagnetic Effects in Semiconductors, Taking Into Account Variation in the Concentration of Current Carriers. II. Galvanomagnetic Effects in Strong Fields. Electron and Phonon Thermal Conductivity - 32.
– (see Bresler, S.E.) - 102.
Pikus, G. Ia. (see Morgulis, N.D.) - 1144.
Pimenov, Iu. V. Transient Processes in a Plant Diode with an External Magnetic Field - 1885.
Pines, B.Ia. Calculation of the Simplest Equilibrium Diagrams for Ternary Alloys. 1. The General Equations and Their Solutions for Solution Decompositions Not Involving a Phase Transition- 2046.
– Criticism of Williamson and Smallman's Article on the Use of Fourier Analysis for the Interpretation of Broadened Lines in X-Ray Patterns of Cold-Worked Iron and Molybdenum [1] - 2308.
– Sintering of Multiphase Bodies. I. the Coalescence of Heterogeneous Grains - 2023.
– and A.F. Sirenko. Some Laws of the Mechanical Properties of Samples of Sintered Powdered Metals. II. Tests at High Temperatures - 2300.
– and N.I. Sukhinin. Some Laws of Mechanical Strength in Bodies Produced by Sintering Powdered Metals - 2014.
– and Sukhinin. Sintering of Multiphase Bodies.II. The Sintering of Compressed Powder Mixtures. Contraction as a Function of Concentration - 2038.
Pivovarov, V.M. and Ia. S. Bobovich. Photoelectric Recording of Raman Spectra from Gases - 624.
Pokrovskii, E.I. and I.P. Kotova. Investigation of Crystallinity of Some Polymers by Infra-Red Spectroscopy - 1417.
Polishchuk, D.I. (see Fedoseev, V.A.) - 1470.
Poltinnikov, S.A. (see Maslakovets, Iu. P.) - 2316.
Porovskii, K.S. (see Balygin, I.E.) - 1663.
Potseluiko, V.A. (see Vulis, L.A.) - 70,78.
Pozhela, Iu. K. Drift of Current Carriers Which Have Been Formed by the Effect of a Strong Electric Field - 277.
– Problem of the Effect of a Strong Field in Semiconductors - 273.
Privalova, V.E. (see Nemilov, Iu. A.) - 56.
Prochakov, L.K. (see Gutin, S.S.) - 851.
Prokhorov, P.S.(see Deriagin, B.V.) - 873.
Pruzhinina-Granovskaia, V.I. (see Ivanov, L.I.)- 216.
Ptitsyn, O.B.(see Vol'kenshtein, M.V.) - 2138.
Ptushinskii, Iu. G. Investigation of an Oxide Cathode With a Core Consisting of Nickel and an Admixture of Tungsten - 228.
Pukhov, V.I. Mean Effective Beam Length - 1055.
– Question of Effective Radiation Temperature - 145.
Push, V.E. (see Deriagin, B.V.) - 1291.
Rachko, V.A. Condensation of Water Vapor from a Steam and Air Mixture in a Vacuum - 564.
– Experimental Study of the Effect of Speed and Composition of a Steam and Air Mixture and of the Height of Vacuum on Heat Emission During the Condensation of Water Vapor - 579.
Raff, E.L. (see Mochalov, K.N.) 487.
Rashba, E.I. Diffusion of Current Carriers in a Semiconductor in the Presence of an External Electrical Field - 1384.
– and K.B. Tolpygo. Direct Voltage-Current Characteristics of a Plane Rectifier with Large Currents - 1388.
– (see Glinchuk, K.D.) - 2521.
Ratner, S.B. and V.V. Lavrent'ev. Comparison of Friction and Electrical Conductivity of Rubber- 839.

Rautian, G.N., N.V. Lobanova, and M.A. Znamenskaia. Concerning Illumination Sources for the Exact Determination of the Color of Non-Luminous Objects - 193.
Razbash, R. Ia. (see Bogdanov, S.V.) - 940.
Rek'ka, O. A. (see Chepur, D.V.) - 534.
Regel' A.I. (see Elpat'evskaia, O.D.) -2350.
Regel', A. R. (see Ablova, M. S.) - 1337.
– (see Elpat'evskaia, O.D.) -2091.
Regel, V. R. Kinetics of the Growth of Cracks During the Breaking of Solids - 353.
Regirer, S.A. (see Gorazdovskii, T. Ia.) - 1493.
Reinov, N.M. (see Gross, E.F.) - 677.
Reitlinger, S.A., A.A. Maslennikova and I. S. Iarkho. Gas Permeability of Polyorganosiloxane Resins - 2467.
Renne, V.T. and Tsiui Si-Sin'. Problem of Investigation of Gas Evolution in Capacitor Oil - 1048.
Revzin, L. S. (see Nosenko, B.M.) - 1983.
Riazanov, A. N. (see Shkliarevskii, I.N.) - 634.
Rips, S.M., The i-d Diagram of Oxygen -2648.
Rodionov, K.P. Some Thermodynamic Properties of a Solid Body at High Pressures - 368.
Rogovina, A.A., N.I. Davidovich, B.F. Nebylitsyn, V.V. Nikitin, and V.A. Kargin. Study of the Behavior of Tire Cord Under Impact. I. A. Pendulum Impact Machine for Testing Cord Thread - 2594.
– and V.A. Kargin, Study of the Behavior of Tire Cord Under Impact. II. Cord Resistance to Impact Loads - 2599.
Romanov, Iu. F. (see Bak, M.A.) - 372.
Rosanova, N.B. and V. L. Granovskii. Initiation of Electrical Breakdown of a High Vacuum Gap - 471.
Rosenfel'd, L.M., V.V. Onosovskii and G.S. Serdakov. Experimental Verification of the Applicability of a Cooling Machine to the Heating and Cooling of Buildings in Conjuction with the Work of a Hydroelectric Station - 1975.
Rosliakov, V. V. (see Rzhanov, A.V.) - 2081.
Rozenshtein, L.D. (see Bazhenov, N.M)- 1677.
Rozman, I.M. and K.G. Tsimmer. Investigation of the Electric Conductivity of Insulating Materials Before, During, and After Irradiation - 1634.
Rudenok, M.I. (see Berlaga, R. Ia.) - 1.
Rumsh, M.A. and Iu. G. Baklagina. Problem of the Electron Diffraction Study of the Texture of Layers Obtained by Evaporation in Vacuum -1459.
Ryvkin, S.M. Mechanism of Pulse Formation in Semiconducting Crystal Counters. (Motion of Charge on Pulse Ionization in Semiconductors)- 2580.
– So-Called "Secondary" and "Through" Photocurrent in Semi-conductors - 2357.
– and R. Yu. Khansevarov. Temperature Dependence of the Spectral Distribution of Photoconductivity in Gallium Selenide and Gallium Telluride - 2688.
Riabinin, Iu. N. Certain Experiments on Dynamic Compression of Substances - 2575.
Rzhanov, A. O. Relationship of Surface and Volume Recombination in Germanium Triodes with Fused-in Electron-Hole Transitions - 233.
Rzhanov, A. V. Influence of Impurities on Lifetime of Excess Charge Carriers in Germanium - 1360.
– I. G. Neizvestnyi and V.V. Rosliakov. Surface Conductivity and Surface Recombination in Germanium Specimens - 2081.
Sabaitis, Iu. I. (see Akatnov, N.I.) - 1986.
Sabsovich, L. L. (see Kolomenskii, A.A.) - 555.
Sali, A. O. Theory of the Microphone Chamber in a Veingerov Spectrophone and of an Optical Acoustical Gas Analyzer - 152.
Samsonov, G.V. Electrical Conductivity of Certain Compounds of the Transitional Metals with Boron, Carbon and Nitrogen, and the Electrical Conductivity of Alloys of These Compounds - 695.
Savel'ev, V. Ia. Molds for Glass Cones of Kinescopes with Rectangular Screens Which Can be Produced by a Centrifugal Process - 615.
Savvon, S.M. (see Tsvertkov, V.N.) - 342.
Sazhin, B. I. (see Mikhailov, G. P.) - 1670.
Seleznev, V. K. (see Bol'shov, V.G.) - 1612.
Semerchan, A.A. (see Vereshchagin, L.F.) - 2484.
Serbulenko, M.G. (see Gutin, S.S.) - 851.
Serdakov, G.S. (see Rosenfel'd, L.M.) - 1975.
Serdiuk, R. L. (see Kats, M. Ia.) - 2654.
Shalabutov, Iu. K. and N.S. Maslenikova. Energy Distribution of the Photoelectrons From the External Photoeffect in Antimony-Cesium Cathodes - 1137.
Shamshev, V.N. (see Lapitskii, Iu. Ia.) - 714.
Shestopalov, L.M. Computation of Relaxation Stresses in Metals - 998.
Shestopalov, V. P. Propagation of Electromagnetic Waves Along a Waveguide Containing a Helix and Partially Filled with Dielectric - 2659.
Shervardin, A.N. (see Kosman, M.S.) - 1407.
Shigin, V.A. (see Gorlov, G.V.) - 964.
Shinianskii, L. A. and V.I. Solon'ko. Absorption of Ultrasonic Vibrations as a Measure of the Elastic Properties of Rubber - 2231.
Shishkin, N.I. Dependence of the Kinetic Properties of Liquids and Glasses on Temperature, Pressure, and Volume - 1422.

Shkliarevskii, I.N. Question of the Phase Relations at the Boundary Between a Dielectric and a Metal - 327.
– and A.N. Riazanov. Measurement of the Indices of Refraction of Thin Films of Zinc Sulfide and Cryolite - 634.
– (see Sinel'nikov, K.D.) - 89.
Shneider, A.D. Kinetics of Photocurrent Growth and the Quenching of Photoconductivity in Cadmium Sulfide - 1396.
– Quenching of Photoconductivity in Mercuric Sulfide - 1400.
Sholokhovich, M.L. (see Khodakov, A.L.) - 2422.
Shotov, A.P. Breakdown of Electron-Hole Junctions in Germanium by Impulse Voltage - 1591.
Shpinel' V. S. and O. Sh. Grois. Vertical Focusing in a Spiral β -Spectrometer - 2191.
Shteinberg, A.A. (see Korenblit, L.L.) - 912.
Shteinbok, N.I. Problems of the Principle of Action of Alpha-Ionization Gas Analyzers - 170.
Shtenbek, M. and P.I. Baranskii. Investigation of the Peltier Effect and Thermoelectric Power in Germanium - 659.
– and P. I. Baranskii. Methods for Precision Measurements of the Peltier Effect and the Thermoelectric Power - 1345.
Shtepa, N.I. Graphical Construction of Charged Particle Trajectories in Electrostatic Fields by the Radius-of-Curvature Method -2212.
Shuba, Iu. A. Photoelectron Emission from CdS - 1103.
Shul'man, A.R. and E.I. Miakinin. Secondary Electron Emission from Nickel and Molybdenum at Low Primary Electron Energies - 2157.
Shuvalov, Iu. N. Connection of Changes of Electrical Conductivity with Redistribution of Electron Density in Cadmium Sulfide - 1809.
Sidorovich, E.A. (see Kuvshinskii, E.V.) - 863.
Sikorskii, Iu. A. Effect of Disruptions of the Crystalline Lattice upon the Permittivity of Rock Salt Crystals - 2404.
Sinel'nikov, K.D., LN. Shkliarevskii and Vlasenko. Optical Properties of Compound Intereference Light-Filters - 89.
Sirenko, A.F. (see Pines, B. Ia.) - 2300.
Si-Sin' Tsiui (see Renne, V.T.) - 1048.
Skanavi, G. I. and A.M. Kashtanova. Technique of Measuring the Coefficient of Thermal EMF in Semiconductors - 882.
Slavnov, V.V. Free Heat Convection in Metallic Vertical Tubes of Circular Section - 1938.
Slivkov, I.N. (see Lapitskii, Iu. Ia.) - 714.
Smirnov, L.S. (see Vavilov, V.S.) - 1805.
Simonov, N.N. (see Zel'dovich, Ia.B.) - 1689.
Smirnova, E.V. (see Vargaftik, N.B.) - 1221.
Smolenskii, G. A. and A.I. Agranovskaia. Dielectric Constants of Cerates of Divalent Metals - 467.
Sobolev, V.V. (see Gross, E.F.) - 1580.
Sokol'skaia, I.L., Surface Migration of Tungsten Atoms in an Electric Field - 1147.
Solon'ko, V.I. (see Shinianskii, L.A.) - 2231.
Sorokin, O.V., Measurement of the Lifetime, Diffusion Coefficient, and Rate of Surface Recombination for Nonequilibrium Current Carriers in a Thin Semiconductor Specimen- 2390.
– Measurement of Surface Recombination Rates in Thin Semiconductor Specimens With Qualitatively Different Boundaries - 2384.
Spitsyn, A.V. (see Vavilov, V.S.) - 1805.
Stafaev, V.I. (see Lebedev, A.A.) - 2071.
Stafeev, V.I. and V.M. Tuchkevich. Investigation of the Resistivity Variation of Germanium in a Magnetic Field - 268.
– V.M. Tuchkevich and N.S. Iakovchuk. Operation of a Transistor Amplifier in the Egression Mode - 11.
Stamzas, M.S. (see Kolomoets, N.V.) - 662.
Stepanov, A.V. and V.P. Bobrikov. Dependence of the Optical Elasticity Limit Determined on the Basis of the System (111); [011] Upon Temperature for Rock Salt Crystals - 777.
– (see Zhitnikov, R.A.) -754, 762, 769.
Sterman, L.S. Generalization of Experimental Data Concerning the Bubbling of Vapor Through Liquid - 1479.
– N. G. Stiushin and V.G. Morozov. Investigation of the Dependence of Critial Heat Flow on the Rate of Circulation - 2250.
Stil'bans, L. S. (see Iordanishvili, E.K.) -466, 928.
Stil'bans, L. S.(see Iordanishvili, E.K) - 928.
– (see Kolomoets, N.V.) - 662.
Stiushin, N.G. (see Sterman, L.S.) - 2250.
Solanova, I. G. Electron-Density Distributions in Electron-Microscope Images - 969.
Strakhov, L.P. (see Berlaga, R. Ia.) - 1.
Subashiev, V.K.(see Maslakovets, Iu. P.) -2316.
Sukhinin, N. I. (see Pines, B. Ia.) - 2014, 2038.
Svechnikov, S.V. Properties of Cadmium Sulfide Photoresistances Irradiated by γ- and β -Rays- 1601.
Syrkin, L.N. Temperature Dependence of Thermal Ionic Polarization - 1134.
Talanov, V.I. (see Miller, M.A.) -2665.
Tal'rose, V. L. and E.L. Frankevich. Temperature of the Gas in the Ion Source of a Mass Spectrometer - 479.

Tanaev, A.A., Effect of Free Convection on the Coefficient of Resistance of a Plate with a Laminar Flow Regime in the Boundary Layer - 2477.
- Heat Exchange in Conditions of Free Laminary Movement of Gas with Variable Viscosity at a Vertical Wall - 2621.
Tamanaiko, Iu. M. (see Chernobyl'skii, I.I.) -2244.
Terekhina, N.N. (see Vulis, L.A.) - 1249.
Tiabin, N.V. Anomalous Viscous Fluid Flow Between Two Plates and Between Two Coaxial Cylinders - 1929.
Tikhodeev, N.N. Conceming a Certain Rule in the Transition of Unipolar Corona Discharge to Spark Discharge - 1455.
- Effect of Geometric Parameters on the Generalized Corona Characteristics of High Voltage DC Lines, III. Lines with Horizontal Protective Cables - 2433.
- (see Vorob'ev, A.V.) - 742, 749.
Tikhonov, V.I. When a Nonstationary Random Process can be Replaced by a Stationary One - 1994.
Timan, B.L. (see Aptekar, I.L.) - 337.
Timrot, D.L. (see Tsederberg, N.V.) - 1791.
Tiutin, I.A. End Effects in Induction Heating - 2642.
Todes, O.M. (see Vetrov, B.N.) - 782.
Tolpygo, K.B. Emission Capability of an Abrupt p-n-Transition and its Effect Upon the Conductivity of a Semiconductor - 287.
- (see Dykman, I.M.) - 2376.
- (see Kaplunova, E.I.) - 2102.
- (see Rashba, E.I.) - 1388.
Tolstoi, D.M. (see Deriagin, B.V.) - 1291.
Toporets, A.S. (see Ivanov, A.P.) - 598, 605.
Triers, V.I. (see Kornfeld, M.) - 2685.
Trofimenko, A.T. (see Vulis, L.A.) - 2616.
Troitskii, V.S. Radio Astronomical Method of Measuring Antenna Losses - 468.
Tsederberg, N.V. and D.L. Timrot. Experimental Determination of the Thermal Conductivity of Liquid Oxygen - 1791.
Tseitlin, L. A. Skin Effect in Conductors with Rectangular Cross Section - 2679.
Tsidil'kovskii, I.M. (see Bashirov, R.I.) - 2129.
Tsigelka, I.,L. Chernyi, V. Gusa, I. Krzhizh and I. Ladnar. Mechanism of the Arc Discharge at High Pressure in the Nozzle of a Pneumatic Switch - 481.
Tsikin, A.N. (see Koikov, S.N.) -2180.
Tsimmer, K. G. (see Rozman, I.M.) - 1634.
Tsobkallo, S.O. New X-Ray Chambers for the Investigation of the Fine Structure of Polycrystalline Materials - 210.
Tsukkerman, I.I. (see Bonshtedt, B.E.) - 1897.
Tsvetkov, N.M. (see Bogoroditskii, N.P.) - 1826.
Tsvetkov, V.N. and S.M. Savvon. Dynamic Birefringence in Solutions of High Molecular Polystyrene Fraction - 342.
Tsyrlin, L.E., Some Questions in the Mathematical Theory of the Corona Discharge at Constant Potential - 2439.
Tuchkevich, V.M. (see Lebedev, A.A.) - 2071.
- (see Stafeev, V.I.) - 11, 268.
Umarov, S.U. and L.G. Gurvich. Theory of the Metal-Semiconductor Contact - 2115.
Umnik, N.N. (see Aerov, M.E.) - 1203, 1212.
Vainshtein, L.A. Electromagnetic Surface Waves Above a "Comb" (Corrugated) Structure - 379.
- Electron Waves in Retardation (Slow-Wave) Systems. I. General Theory - 119.
- Electron Waves in Retardation (Slow-Wave) Systems. II. Specific Problems - 135.
Vaisman, L.M. (see Fainerman, I.D.) - 2410.
Vakhrameev, A.N. One Error in the Theoretical Analysis of Ferroresonant Phenomena at a Frequency Equal to One-Third of the Frequency of the Coercive Force - 1802.
Vandakurov, Iu. V. Concerning Several Antisymmetric Magnetic Fields with Double Focusing -1558.
- Electron-Optical Systems with Two Dimensional Fields - 2491.
Vargaftik, N.B. and E.V. Smirnova. Temperature Dependence of Water Vapor Heat Conductivity - 1221.
Vasenin, F.I. and P.F. Konovalov. Ionization X-ray Structure Investigation of Bismuth Telluride - 1376.
Vasil'ev, D.M., G.I. Margolin and S.V. Dianov. X-ray Investigation of the Nature of Fracture Under Impact Loading - 2058.
- and L.S. Evlashin. Plastic After Effect in Metals - 1322.
- Measurement of Macrostresses by X-ray Diffraction - 2310.
- Nautre of After Effect in Metals - 1328.
Vasil'ev, G.F. (see Elinson, M. I.) - 1623.
Vavilov, V. S., L.S. Smirnov, G.N. Galkin, A. V. Spitsyn and V.M. Patskevich. Formation of Crystal Lattice Defects in Germanium by Fast-Electron Bombardment - 1805.
Veinberg, V.B. and Iu. V. Mal'tsev. Conversion of Radiation into Electricity - 2295.
Veksler, V.I. and M.B.Ben'iaminovich. Production of Secondary Ions From Tantalum and Nickel Bombarded by Positive Cesium Atoms - 1626.
Venerovskii, D.N. (see Mikhalevskii, V.S.) - 506.
Verebeichik, N.M. and V. I. Odelevskii. Dielectric Losses in Glass. II. Investigation of the Electric and Physical Properties of Sodium Aluminosilicate Glass. - 1647.

– and V.I. Odelevskii. Dielectric Losses in Glass. III. "High Temperature" Relaxation Dielectric Losses in Alkali Glasses - 1654.
Vereshchagin, L.F., A.A. Semerchan, A.I. Firsov, V.A. Gal aktionov and F.M. Filler. Some Investigations of the Hydrodynamics of Jets of Liquid Issuing From a Nozzle at Pressures up to 1500 Atmospheres - 2484.
– A.I. Likhter, and V.I. Ivanov. Production of Ultra High Pressures in a Device Using a Conical Piston - 860.
– (see Kalashnikov, Ia.A.) - 1749.
Vetrov, B.N. and O.M. Todes. Heat Transfer in Tubes with Packing - 782.
Vlasenko, N.A. (see Sinel'nikov, K.D.) - 89.
Vol'kenshtein, M.V. Internal Rotation in Polymer Chains and Their Physical Properties. IV. Theory of Melting for Polymer Crystals - 2217.
– and O.B. Ptitsyn. Relaxation Theory of Vitrification. 1. The Solution and Investigation of the Basic Equation - 2138.
– (see Bazhenov, N.M.) - 1677.
Volokobinskii, Iu. M. Effect of Air Inclusions Upon the Dielectric Strength and Losses of Insulating Materials - 547.
Vorob'ev, A.A. Electrical Strength of Crystals. Their Mechanical and Thermal Stability and Lattice Energy - 324.
– Remarks Concerning the Effect of Plastic Deformation in Monocrystals of Alkali-Halide Salts on Their Electrical Strength - 322.
– and N.N. Tikhodeev. Influence of Geometric Parameters of High-Voltage DC Transmission Lines on Their Universal Corona Characteristics - -742.
– and N.N. Tikhodeev. Influence of Geometric Parameters of High-Voltage DC Transmission Lines on Their Universal Corona Characteristics. II. Bipolar Lines - 749.
– and V.D. Kuchin. Radiation from Dielectrics in Strong Electric Fields - 2431.
Vorob'ev, Iu. V. Diffusion Pattern in Electrostatic Immersion Lenses - 2200.
Vul, B.M., Puncture of Transition Layers in Semiconductors - 2325.
– (see Bogdanov, S.V.) - 940.
Vullis, L.A., and V.P. Kashkarov. Motion of a Laminar Twisting Stream of Incompressible Fluid Along the Surface of a Cone - 2612.
– N.D. Kosov and V.A. Potseluiko. Determination of the Coefficient of Thermal Conductivity of Loose Materials by the Mal'mgren-Shuleikin Method - 78.
– and V.A. Potseluiko. Determination of the Temperature Function for the Coefficient of Thermal Conductivity - 70.
– and A.T. Trofimenko. Heat Problems for a Laminary Stream Spreading Along a Wall - 2626.
– N.N. Terekhina. Propagation of a Turbulent Gas and Jet in a Medium With a Different Density - 1249.
Zakharchenia, B.P. (see Gross, E.F.) - 677.
Zaleskii, A.M. Determination of the Thermal Breakdown Potential for a Cylindrical Insulator - 1165.
Zavaristskii, N.V. and A.G. Zel'dovich. Thermal Conductivity of Technical Materials at Low Temperatures - 1970.
Zel'dovich, A.G. (see Zavaritskii, N.V.) - 1970.
Zel'dovich, Ia. B., S.M. Kogarko and N. N. Simonov. Experimental Investigation of Spherical Detonation of Gases - 1689.
Zhitnikov, R.A. and A.V. Stepanov. Optical Method of Investigation of Averaged Stressed States in Small-grained Polycrystals. I. Preparation of Small-grained Polycrystal Specimens of Silver Chloride - 754.
– and A.V. Stepanov. Optical Method of Investigation of Averaged Stressed States in Small-grained Polycrystals. II. Photoelastic Effects in a Crystal of the Cubic System Under Plane Loading - 762.
– and A.V. Stepanov. Optical Method of Investigation of Averaged Stressed States in Small-grained. Polycrystals. III. Photoelastic (piezooptical) Properties of Polycrystalline Silver Chloride - 769.
Zingerman, A.S. Dependence of the Pressure at the Front of a Shock Wave Upon the Steepness of the Energy-pulse Front When an Electrical Discharge Takes Place in a Liquid - 2454.
– Effect of Thermal Conductivity Upon the Electrical Erosion of Metals - 1945.
– Propagation of a Discharge Column - 992.
Znamenskaia, M.A. (see Rautian, G.N.) - 193.
Zorye, V.A. Theory of a Triode Oscillator With Feedback - 176.

Soviet Physics – Technical Physics: Analytical Subject Index for Vol. 1, 1956

(Russian Original Vol. 26, 1956, Journal of Technical Physics (USSR))

References with L are Letters to the Editor. References with BC are Brief Communications.
Items are listed under the following categories:

Antennas
Apparatus
Biography
Combustion
Computing Techniques
Crystals and Crystal Growth
Dielectrics and Dielectric Breakdown in Insulators
Diffusion
Editorial
Elasticity and Inelasticity
Electrical Circuits and Networks
Electrical Conductivity
Electrical Contacts
Electrical Discharges
Electromagnetic Waves
Electron and Ion Optics
Electron Beams
Electron Diffraction
Electron Emission
Electron Microscopy
Errata
Explosives and Explosions
Ferroelectricity
Ferromagnetic Materials and Ferrites
Fluid Dynamics
Fluid Flow, Low Speed
Fracture
Friction and Wear
Liquids
Luminescence
Magnetism
Mass Spectrometry
Metallurgy
Noise
Nuclear Physics and Instrumentation
Nuclear Reactor
Optical Properties
Optics
Phase Transformations
Plastic Deformation
Polymers
Radiation Effects in Solids
Rheology
Semiconductor Devices
Semiconductors
Shock Waves
Sound Waves
Space Charge
Spectra and Spectroscopy; Gas Analysis
Surface Properties
Thermal Conductivity and Thermal Conduction; Heat Transfer
Thermodynamic Properties and Thermodynamics
Thermoelectricity
Thin Films
Transmission Lines and Wave Guides
Turbulence
Vacuum Technique
Vibrations
Viscosity and Viscoelasticity
X-Rays and X-Ray Diffraction

Antennas

Integral Equation for Currents in the Theory of Metal Antennas, A. V. Gaponov and M. A. Miller – 2674.

Radio Astronomical Method of Measuring Antenna Losses, V. S. Troitskii – 468 L.

Apparatus

Antimony-Lithium Photocathode, Iu. A. Nemilova and V. E. Privalova – 56.

Application of the Method of Curvilinear Coordinates to the Design of a Π-Shaped (Reentrant) Resonator, V. L. Patrushev – 806.

Calculation of the Parameters of a Rectification Column, V. P. Peshkov – 639.

Certain Features of Dynamic Vacuum Systems, A. L. Mints and N. M. Kristi – 1760.

Diffusion Hygrometer, B. V. Deriagin, P. S. Prokhorov, G. A. Batova and L. F. Leonov – 873.

Elimination of Critical Energy in Strong-Focusing Synchrotrons, A. A. Kolomenskii – 721.

Experimental Determination of the Thermal Conductivity of Liquid Oxygen, N. V. Tsederberg and D. L. Timrot – 1791.

Investigation of a Vortex Tube, A. P. Merkulov – 1243.

Large Rectangular Wilson Chamber, I. L. Ivanovskaia and A. G. Novikov – 206.

Molds for Glass Cones of Kinescopes with Rectangular Screens Which Can be Produced by a Centrifugal Process, V. Ia. Savel'ev – 615.

Multi-Link Mechanical Filters, D. D. Matskevich – 1088.

Pendulum Elastometer of the "KS" Type, E. V. Kuvshinskii and E. A. Sidorovich – 863.
Precision Determination of Polycrystal Lattice Parameters with a Back-Reflection X-ray Camera of High Resolving Power, M. A. Gurevich and B. F. Ormont – 1081.
Problem of the Choice of Optimum Conditions for the Operation of a Helium Liquefier, I. B. Danilov – 1023.
Study of the Topography of the Inhomogeneous Plane Magnetic Field of a Six-Pole Electromagnet, M. I. Korsunskii, Ia. M. Fogel', G. A. Bykova, L. I. Livshits, N. S. Lozovskii and A. A. Chovnik – 1192.
Thermal Method for Determining the Moisture of Finely Dispersed Capillary Porous Materials, V. N. Ershov and N. M. Ershova – 1278.

Biography

A. I. Tudorovskii – Distinguished Representative of Science and Engineering of the Russian Soviet Federative Socialist Republic – 2064.
Professor I. G. Kliatskin (On the Sixtieth Anniversary of His Birth and on Thirty-Five Years of Scientific-Technical and Pedagogical Activity) – 681.
Professor P. V. Shmakov (On the Seventieth Anniversary of His Birth) – 678.

Combustion

Evaporation of Drops of Combustible Liquids, V. A. Fedoseev and D. I. Polishchuk – 1470.

Computing Techniques

Electronic Method for Converting Functional Scales, A. I. Makhlis and V. M. Makushenko – 231 BC.
When a Nonstationary Random Process can be Replaced by a Stationary One, V. I. Tikhonov – 1994.

Crystals and Crystal Growth

Adsorption Spectrum and a Study of Excitons in Cadmium Selenide Crystals, E. F. Gross and V. V. Sobolev – 1580 BC.
Article by F. Nechai "On the Possibility of Measuring Refractive Indices of Crystalline Bodies by Means of an Abbe Refractometer" – 1803 L.
Certain Experiments on Dynamic Compression of Substances, Iu. N. Riabinin – 2575.
Dependence of the Optical Elasticity Limit Determined on the Basis of the System (111); [011] Upon Temperature for Rock Salt Crystals, A. V. Stepanov and V. P. Bobrikov – 777.
Effect of Admixtures Upon the Permittivity and Piezoelectric Modulus of Rochelle Salt, T. Kh. Chomonov – 319.
Effect of Disruptions of the Crystalline Lattice Upon the Permittivity of Rock Salt Crystals, Iu. A. Sikorskii – 2404.
Effect of Temperature on the Photoconductivity of Polycrystalline Sheets of HgI_2, D. V. Chepur and O. A. Red'ka – 534.
Electrical Properties of Bismuth Chalcogens. II. Electrical Properties of Bismuth Selenide Bi_2Se_3, P. P. Konorov – 1365.
Electrical Properties of Bismuth Calcogens. III. Electrical Properties of Bismuth Telluride (Bi_2Te_3). P. P. Konorov – 1371.
Electrical Strength of Crystals, Their Mechanical and Thermal Stability and Lattice Energy, A. A. Vorob'ev – 324.
Field Mass of Polarizing Excitons in Ionic Crystals, I. M. Dykman, E. I. Kaplunova and K. B. Tolpygo – 2376.
Influence of Conditions of Polarization on Piezo-Properties of Barium Titanate, S. V. Bogdanov, B. M. Vul and R. Ia. Razbash – 940.
Influence of Impurities on Lifetime of Excess Charge Carriers in Germanium, A. V. Rzhanov – 1360.
Instrument for Studying the Piezoelectric Properties of Crystals, M. I. Iaroslavskii, R. M. Liutenberg and V. N. Chernyshov – 425.
Investigation of the Peltier Effect and Thermoelectric Power in Germanium, M. Shtenbek and P. I. Baranskii – 659 BC.
Ionization X-ray Structure Investigation of Bismuth Telluride, F. I. Vasenin and P. F. Konovalov – 1376.
Isothermal Time Variations of the Electrical Conductivity of Polycrystalline Selenium After Abrupt Temperature Variations, I., P. T. Kozyrev – 252.
Isothermal Time Variations of the Concentration of Current Carriers and of the Electrical Conductivity of Polycrystalline Selenium After Abrupt Temperature Variations, II, P. T. Kozyrev – 262.
Kinetics of Photocurrent Growth and the Quenching of Photoconductivity in Cadmium Sulfide, A. D. Shneider – 1396.
Mechanism of Relaxation Dielectric Losses in Crystals with Polar Molecules, I., Ts. Liast – 2223.
Method of X-ray Study of Polycrystalline Specimens Possessing Texture, D. M. Vasil'ev – 671 BC.
Monocrystals of Strontium Titanate, A. L. Khodakov, M. L. Sholokhovich, E. G. Fesenko, and O. P. Kramarov – 2422.
Optical Method of Investigation of Averaged Stressed States in Small-Grained Polycrystals, I. Preparation of Small-Grained Polycrystal Specimens of Silver Chloride, R. A. Zhitnikov and A. V. Stepanov – 754.

Optical Method of Investigation of Averaged Stressed States in Small-Grained Polycrystals. II. Photoelastic Effects in a Crystal of the Cubic System Under Plane Loading, R. A. Ahitnikov and A. V. Stepanov – 762.

Optical Method of Investigation of Averaged Stressed States in Small-Grained Polycrystals. II. Photoelastic (Piezooptical) Properties of Polycrystalline Silver Chloride, R. A. Zhitnikov and A. V. Stepanov – 769.

Photoconductivity and the Emission and Absorption of Light in Crystals of HgI_2, E. F. Gross, A. A. Kapliankii and B. V. Novikov – 674 BC.

Possibility of Measuring the Refractive Index of a Crystalline Body with an Abbe Refractometer, F. Nechai – 423.

Quenching of Photoconductivity in Mercuric Sulfide, A. D. Shneider – 1400.

Question of Anomalous Polarization in Polycrystalline Titanium Dioxide, N. P. Bogoroditskii, I. D. Fridberg and N. M. Tsvetkov – 1826.

Radiation Spectrum of the Exciton, E. F. Gross and M. A. Iakobson – 1340 BC.

Stability of Crystal Structure in the Solid Solution System HgSe–HgTe, O. D. Elpat'evskaia, R. A. Konikova, A. R. Regel' and I. V. Iavorskii – 2091.

Structure of the Spectral Curve for the Internal Photoeffect in Crystals of Cadmium Sulfide, E. F. Gross, A. A. Kapliankii and B. V. Novikov – 900 BC.

Study of Stresses in Silver Chloride Crystals when They are Subjected to Elastic-Plastic Inflection, B. A. Kuznetsov – 1570.

Theory of Excitons in Ionic Crystals – 2692 L.

Thermal Expansion and Thermal Conductivity of Some Crystals, T. A. Kontorova – 1959.

Zeeman Effect in the Yellow Series of the Exciton in a Crystal of Cuprous Oxide, E. F. Gross, B. P. Zakharchenia and N. M. Reinov – 677 BC.

Dielectrics and Dielectric Breakdown in Insulators

Ageing of Ceramic Insulation at High Temperatures, I. E. Balygin and K. S. Porovskii – 1662.

Breakdown of Ceramic Specimens When Subjected to High-Frequency Voltages and Various Temperatures, I. E. Balygin – 2415.

Character of the Temperature Dependence of Dielectric Losses on Polarization of Ionic Compounds, N. P. Bogoroditskii and I. D. Fridberg – 1821.

Dependence of Dielectric Losses in Ceramic Materials on Electric Field Strength, I. E. Balygin and A. I. Obraztsov – 1850.

Determination of the Thermal Breakdown Potential for a Cylindrical Insulator, A. M. Zaleskii – 1174.

Dielectric Constants of Cerates of Divalent Metals, G. A. Smolenskii and A. I. Agranovskaia – 467L.

Dielecrric Losses in Boron-Alkali Glasses at Low Temperatures, V. A. Ioffe – 498.

Dielectric Losses in Glass. II. Investigation of the Electric and Physical Properties of Sodium Aluminosilicate Glass, N. M. Verebeichik and V. I. Odelevskii – 1647.

Dielectric Losses in Glass. III. "High Temperature" Relaxation Dielectric Losses in Alkali Glasses, N. M. Verebeichik and V. I. Odelevskii – 1654.

Dielectric Properties of Several Solid Solutions Which Contain Barium Titanate, N. S. Novosil'tsev and A. L. Khodakov – 306.

Dielectric Relaxation Losses in Polymethylmethacrylate, G. P. Mikhailov, T. I. Borisova and D. A. Dmitrochenko – 1857.

Dielectric Strength of Rochelle Salt Crystals When They are Subjected to a DC Voltage, an AC Voltage (50 CPS) and to a Pulse Voltage with a Duration of 10^{-4}–10^{-7} sec, K. M. Krevroleva – 2175.

Dielectric Stength of Thin Layers of Aluminum Oxide, S. N. Koikov and A. N. Tsikin – 2180.

Effect of Air Inclusions Upon the Dielectric Strength and Losses of Insulating Materials, Iu. M. Volokobinskii – 547.

Effect of Disruptions of the Crystalline Lattice Upon the Permittivity of Rock Salt Crystals, Iu. A. Sikorskii – 2404.

Investigation of the Dielectric Polarization and Losses of Polytrifluorochlorethylene, G. P. Mikhailov and B. I. Sazhin – 1670.

Mechanism of Relaxation Dielectric Losses in Crystals with Polar Molecules, I., Ts. Liast – 2223.

Problem of Investigation of Gas Evolution in Capacitor Oil, V. T. Renne and Tsui Si-Sin' – 1048.

Problem of the Variation in the Capacitance of a Pile of Capacitor Paper When it is Compressed, I. D. Fainerman and L. M. Vaisman – 2410.

Radiation from Dielectrics in Strong Electric Fields, A. A. Vorob'ev and V. D. Kuchin – 2431.

Study of the Method of Dielectric Losses of the Dependence on Concentration of the Relaxation Time in Copolymers, G. P. Mikhailov and L. V. Krasner – 1684.

Temperature Dependence of Thermal Ionic Polarization, L. N. Syrkin – 1134.

Question of Dielectric Losses in Solid Amorphous Structures, V. Kh. Kozlovskii – 2186.

Diffusion

Calculation of the Parameters of a Rectification Column, V. P. Peshkov – 639.

Connection with the Article by K. B. Tolpygo and I. G. Zaslavskaia "Bipolar Diffusion in Semiconductors at Large Currents," [Journal of Technical Physics (USSR) 25, 955 (1955)] – 2065 L.
Diffusion of Lead in Lead Telluride, B. I. Boltaks and Iu. N. Mokhov – 2366.
Enrichment of Boron with the Isotope B^{10}, M. Ia. Kats, G. M. Kukavadze and R. L. Serdiuk – 2654.
Heat and Mass Transfer in a Granular Layer. III. Determination of the Mass Transfer Coefficients in a Moving Granular Layer, I. V. Gusev, N. I. Nikitina and M. E. Aerov – 1942.
Investigation of the Vortex Thermal Separation Effect for Gases and Vapors, V. S. Martynovskii and V. P. Alekseev – 2233.
Nature of Surface Zones Which Arise When Chromium Diffuses in Iron, G. N. Dubinin – 1315.
Permeability of Polyorganosiloxane Resins, S. A. Reitlinger, A. S. Maslennikova and I. S. Iarkho – 2467.
Remarks on the Letter of Gubanov and Makovskii in Connection with the Work of Tolpygo and Zaslavskaia "Bipolar Diffusion in Semiconductors at Large Currents" – 2066 L.
Thermohygrometric Methods of Determining the Vapor Concentration in a Surface Layer, N. F. Dokuchaev – 2272.

Editorial

Further Development of Science and Technology – 685.

Elasticity and Inelasticity

Absorption of Ultrasonic Vibrations as a Measure of the Elastic Properties of Rubber, L. A. Shinianskii and V. I. Solon'ko – 2231.
Certain Experiments on Dynamic Compression of Substances, Iu. N. Riabinin – 2575.
Computation of Relaxation Stresses in Metals, L. M. Shestopalov – 998.
Pendulum Elastometer of the "KS" Type, E. V. Kuvshinskii and E. A. Sidorovich – 863.
Production of Ultra High Pressures in a Device Using a Conical Piston, L. F. Vereshchagin, A. I. Likhter and V. I. Ivanov – 860.
Study of Fatigue in Silver Chloride by an Optical Method, B. A. Kuznetzov – 1010.
Study of the Behavior of Tire Cord Under Impact, I. A. Pendulum Impact Machine for Testing Cord Thread, A. A. Rogovina, N. I. Davidovich, B. F. Nebylitsyn, V. V. Nikitin, and V. A. Kargin – 2594.
Study of the Behavior of Tire Cord Impact. II. Cord Resistance to Impact Loads, A. A. Rogovina and V. A. Kargin - 2599.
Time Dependence of Strength of Rubber and Safe Loads, G. M. Bartenev and S. V. Burov – 2472.

Electrical Circuits and Networks

Differential Amplifier with Cathode Coupling for Pulse Operation. II. Correction of Transient Characteristics in the Differential Amplifier, Iu. K. Barsukov – 2000.
Frequency-Changing Direct Current Amplifier, Which Uses the Change in the Resistance of a Semiconductor in a Magnetic Field, V. N. Bogomolov – 2397.
Measurement of Periodic Voltage and Current Pulses of Limitingly Small Magnitude, B. A. Mamyrin – 627.
Method of Amplifying Constant Voltages, A. I. Makhlis and V. M. Makushenko – 460 BC.
Method of Compression of the Bandwidth Required for a Television Channel, D. A. Novik – 886.
Theory of a Triode Oscillator with Feedback, V.A. Zorye – 176.

Electrical Conductivity

Behavior of the Space Charge in a Diode with an Axial Magnetic Field. II. Probe Method, M. M. Filippov – 983.
Comparison of Friction and Electrical Conductivity of Rubber, S. B. Ratner and V. V. Lavrent'ev – 839.
Connection of Changes of Electrical Conductivity with Redistribution of Electron Density in Cadmium Sulfide, Iu. N. Shuvalov – 1809.
Dipole Moments of Dielectric and Semiconducting Particles, D. V. Kuz'min – 1817.
Drift of Current Carriers Which Have Been Formed by the Effect of a Strong Electric Field, Iu. K. Pozhela – 277.
Effect of Admixtures Upon the Electrical Conductivity and Nonlinearity of Carborundums, L. I. Ivanov and V. I. Pruzhinina-Granovskaia – 216.
Electrical Conductivity of Certain Compounds of the Transitional Metals with Boron, Carbon and Nitrogen, and the Electrical Conductivity of Alloys of These Compounds, G. V. Samsonov – 695.
Electrical Conductivity of the Germanium Silicon Alloys in Liquid State, M. S. Ablova, O. D. Elpat'evskaia and A. R. Regel' – 1337 BC.
Electrical Conductivity of Solid Ionic and Atom-Valent Substances. VIII. Concentration Dependence of Electrical Conductivity in Boric and Silicate Glasses, R. L. Miuller – 2529.
Electrical Properties of Bismuth Chalcogens. II. Electrical Properties of Bismuth Selenide Bi_2Se_3, P. P. Konorov – 1365.
Electrical Properties of Bismuth Chalcogens. III. Electrical Properties of Bismuth Telluride (Bi_2Te_3), P. P. Konorov – 1371.

Electrical Properties of Compounds of Bismuth with Elements of the S–Se–Te Group. 1) Electrical Properties of Bismuth Sulfide, Bi_2S_3, P. P. Konorov – 1100.

Emission Capability of an Abrupt p-n Transition and Its Effect Upon the Conductivity of a Semiconductor, K. B. Tolpygo – 287.

Influence of Geometric Parameters of High-Voltage DC Transmission Lines on Their Universal Corona Characteristics, I. Unipolar Lines, A. V. Vorob'ev and N. N. Tikhodeev – 742.

Influence of Geometric Parameters of High-Voltage DC Transmission Lines on Their Universal Corona Characteristics, II. Bipolar Lines, A. V. Vorob'ev and N. N. Tikhodeev – 749.

Investigation of the Electric Conductivity of Insulating Materials Before, During, and After Irradiation, I. M. Rozman and K. G. Tsimmer – 1634.

Isothermal Time Variations of the Concentration of Current Carriers and of the Electrical Conductivity of Polycrystalline Selenium After Abrupt Temperature Variations, II. P. T. Kozyrev – 262.

Isothermal Time Variations of the Electrical Conductivity of Polycrystalline Selenium After Abrupt Temperature Variations, I., P. T. Kozyrev – 252.

Length of the Free Path of the Electron in Liquid and Amorphous Conductors, A. I. Gubanov – 1605.

Mechanism of the Arc Discharge at High Pressure in the Nozzle of a Pneumatic Switch, I. Tsigelka, L. Chernyi, V. Gusa, I. Krzhizh and I. Ladnar – 481.

Problem of the Effect of a Strong Field in Semiconductors, Iu. K. Pozhela – 273.

Electrical Contacts

Effect of Thermal Conductivity Upon the Electrical Erosion of Metals, A. S. Zingerman – 1945.

Electrical Discharges

Application of Spectral Analysis in Investigation of Vapor Phase Produced in Electric Spark Treatment of Metals, L. S. Palatnik and A. N. Liulichev – 825.

Concerning a Certain Rule in the Transition of Unipolar Corona Discharge to Spark Discharge, N. N. Tikhodeev – 1455.

Dependence of the Coefficient of Electron Recombination on Temperature and Pressure, I. L. Aptekar and B. L. Timan – 337.

Dependence of the Pressure at the Front of a Shock Wave Upon the Steepness of the Energy-Pulse Front When an Electrical Discharge Takes Place in a Liquid, A.S. Zingerman – 2454.

Effect of Geometric Parameters on the Generalized Corona Characteristics of High Voltage DC Lines. III. Lines with Horizontal Protective Cables, N.N. Tikhodeev – 2433.

Electron Capture and Ionization in the Interaction of Singly-Charged Positive Ions with Gas Atoms. N. V. Fedorenko, V. V. Afrosimov and D. M. Kaminker – 1861.

Electron-Microscope Investigation of the Structure of Photocathodes Which Have Been Subjected to the Effects of a Gaseous Discharge, A. I. Primer, E. M. Belavtseva and A. M. Gerasimova – 530.

Filamentary Anode in a Gaseous Discharge, B. N. Kliarfel's and A. A. Frid – 2456.

Formation of Negative Hydrogen Ions in Passage of Positive Hydrogen Ions Through an Ultrasonic Stream of Mercury Vapor, Ia. M. Fogel', L. I. Krupnik and V. A. Ankudinov – 1181.

Initial Stages of Negative Point Corona, G. N. Aleksandrov – 2547.

Initiation of Electrical Breakdown of a High Vacuum Gap, N. B. Rosanova and V. L. Granovskii – 471.

Investigation of the Temperature in the Vapor Phase Occurring During the Electrical Spark Treatment of Metals, L. S. Palatnik and A. N. Liulichev – 818.

Ionization of Gases by He^+, Ne^+ and A^+ Ions with the Production of Multiply-Charged Ions in Single Interactions, N. V. Fedorenko and V. V. Afrosimov – 1872.

Physical Conditions for the Production of a DC Corona Discharge in Smooth Conductors, G. N. Aleksandrov – 2554.

Physical Conditions for the Formation of an Alternating Current Corona Discharge, G. N. Aleksandrov – 1714.

Positive Ion Current on the Electrodes of an Arc at Low Pressure, O. B. Firsov – 431.

Propagation of a Discharge Column, A. S. Zingerman – 992.

Role Played by the Surrounding Medium in the Excitation of Atomic Spectra in an Arc Discharge, K. N. Mochalov and E. L. Raff – 487.

Some Questions in the Mathematical Theory of the Corona Discharge at Constant Potential, L. E. Tsyrlin – 2439.

Speed of Formation of the Main Channel of a Long Spark in a Rod-Rod Gap, M. A. Bagirov – 737.

Theory of the Low Voltage Arc Region, A. V. Nedospasov – 1174.

Voltage Current Characteristics of an Electric Arc Cooled in a Slit Canal, G. A. Kukekov – 2463.

Electromagnetic Waves

Apropos Bak, Petrzhak and Romanov's Article "Radiation from a Spherical Source When Self Ab-

sorption is Present " – 2514 L.
Calculation of Approximate Transmission-Line Propagation Constants in the Presence of an Electron Beam, L. N. Loshakov – 792.
Electromagnetic Surface Waves Above a "Comb" (Corrugated) Structure, L. A. Vainshtein – 379.
Electron Waves in Retardation (Slow-Wave) Systems. I. General Theory, L. A. Vainshtein – 119.
Electron Waves in Retardation (Slow-Wave) Systems. II. Specific Problems, L. A. Vainshtein – 135.
Generation of Electromagnetic Waves by Means of a Traveling-Wave Tube with an External Sectioned Helix, V. S. Mikhalevskii and D. N. Venerovskii – 506.
Mean Effective Beam Length, V. I. Pukhov – 1055.
Propagation of Electromagnetic Waves Along a Waveguide Containing a Helix and Partially Filled with Dielectric, V. P. Shestopalov – 2659.
Self-Absorption in a Radiating Sphere – 2512 L.

Electron and Ion Optics

Calculation of the Resolving Power of an Electron Optical Transformer with Homogeneous Fields, B. E. Bonshtedt, T. G. Dmitrieva and I. I. Tsukkerman – 1897.
Concerning Several Antisymmetric Magnetic Fields with Double Focusing, II. Iu. V. Vandakurov – 1558.
Diffusion Pattern in Electrostatic Immersion Lenses, Iu. V. Vorob'ev – 2200.
Effect of Plasma Penetration on the Focusing of an Ion Beam, M. M. Gabovich and E. T. Kucherenko – 975.
Electron-Optical Systems with Two-Dimensional Fields, Iu. V. Vandakurov – 2491.
Focusing System for an Ion Accelerator, Iu. Ia. Lapitskii, I. I. Levintov, I. N. Slivkov and V. N. Shamshev – 714.
Graphical Construction of Charged Particle Trajectories in Electrostatic Fields by the Radius-of-Curvature Method, N. I. Shtepa – 2212.
Theory of Compensation of Ion Beams, V. S. Anastasevich – 1448.
Vertical Focusing in a Spiral β-Spectrometer, V. S. Shpinel' and O. Sh. Grois – 2191.

Electron Beams

Charge-Density Waves in Variable-Speed Electron Beams, P. V. Bliokh and Ia. B. Fainberg – 510.
Theory of a Buncher, V. I. German and A. S. Kompaneets – 654.
Transient Processes in a Plane Diode with an External Magnetic Field, Iu. V. Pimenov – 1885.

Electron Diffraction

Problem of the Electron Diffraction Study of the Texture of Layers Obtained by Evaporation in Vacuum, M. A. Rumsh and Iu. G. Baklagina – 1459.

Electron Emission

Additivity of Photoemission and Secondary Electron Emission of Metals, L. I. Ekertova – 1619.
Antimony-Lithium Photocathode, Iu. A. Nemilova and V. E. Privalova – 56.
Deformation of Secondary Emission Volt-Ampere Curves at Positive Collector Potentials, N. B. Gornii – 702.
Electron-Microscopic Investigation of the Structure of Photoelectric Cathodes, A. I. Frimer and A. M. Gerasimova – 705.
Electron Temperature in Oxide Cathodes, D. G. Bulyginskii and D. N. Dobretsov – 957.
Electron Trajectories in a Static Magnetron, B. Ia. Moizhes – 1780.
Energy Distribution of the Photoelectrons from the External Photoeffect in Antimony-Cesium Cathodes, Iu. K. Shalabutkov and N. S. Maslenikova – 1137.
Investigation of an Oxide Cathode with a Core Consisting of Nickel and an Admixture of Tungsten, Iu. G. Ptushinskii – 228 BC.
Investigation of the Surface Work-Function Distribution for Oxide Cathodes, D. G. Bulyginskii and L. N. Dobretsov – 1115.
Oscillations in Photoelectric Cells and Photomultipliers, P. V. Makovetskii – 2566.
Photoelectron Emission from CdS, Iu. A. Shuba – 1103.
Physical Properties of a Porous Metallic-Film Thermionic Cathode, I., M. D. Morgulis – 517.
Production of Secondary Ions from Tantalum and Nickel Bombarded by Positive Cesium Atoms, V. I. Veksler and M. B. Ben'iaminovich – 1626.
Reverse Current in a Spherical Condenser Type Apparatus, M. Ia. Mandel'shtam – 2167.
Secondary Electron Emission from Nickel and Molybdenum at Low Primary Electron Energies, A. R. Shul'man and E. I. Miakinin – 2157.
Secondary Electron Emission in Copper, Germanium and Tin in the Solid and Liquid States, V. G. Bol'shov and V. K. Seleznev – 1612.
Secondary Electron Emission of a NaBr Single Crystal – 2320L.
Separation of Ions According to Their Mobilities, S. E. Bresler and G. E. Pikus – 102.
Some Investigations of the Flicker Effect, A. N. Malakhov and V. E. Dubrovin – 1413.
Some Regularities of the Phenomena of Electric Erosion of Metals in Low-Voltage Discharges in Liquid, I. G. Nekrashevich and S. P. Mitkevich – 83.

Spreading of a Space Charge Cluster, O. P. Beguchev – 1443.
Tantalum Field Emission, M. I. Elinson and G. F. Vasil'ev – 1623.
Thermionic Emission at the Solid-Liquid Transition Point, V. G. Bol'shov – 1123.

Electron Microscopy

Electron-Density Distributions in Electron-Microscope Images, I. G. Stoianova – 969.
Electron-Microscope Investigation of the Structure of Photocathodes Which Have Been Subjected to Effects of a Gaseous Discharge, A. I. Frimer, E. M. Belavtseva and A. M. Gerasimova – 530.
Electron-Microscope Investigation of the Sub-Electrode Layer of a Selenium Rectifier with a Cadmium Electrode, V. A. Dorin and D. N. Nasledov – 279.
Electron-Microscopic Investigation of the Structure of Photoelectric Cathodes, A. I. Frimer and A. M. Gerasimova – 705.

Errata – 1109, and p. 27 of this index.

Explosives and Explosions

Certain Experiments on Dynamic Compression of Substances, Iu. N. Riabinin – 2575.
Experimental Investigation of Spherical Detonation of Gases, Ia. B. Zel'dovich, S.M. Kogarko and N. N. Simonov – 1689.

Ferroelectricity

Behavior of Ferroelectrics in Strong Electric Fields, V. A. Bokov – 1837.
Dynamic Theory of the Ionic Lattices of Ferroelectric Crystals Under Static Conditions, V. Kh. Kozlovskii – 944.
Effect of Mechanical Pressure Applied to One Side of Ceramic Ferroelectrics on Their Permittivity, M. S. Lur'e and A. I. Medovoi – 1403.
Nonlinear Properties of Ferroelectrics in the Presence of Large Field Intensities, A. L. Khodakov – 47.
Question of Causes of Formation of a Curie Range of Temperatures in Certain Ferroelectric Solid Solutions, V. A. Isupov – 1846.

Ferromagnetic Materials and Ferrites

End Effects in Induction Heating, I. A. Tiutin – 2642.
Ferromagnetic Sphere in a Strong Field, B. M. Fradkin – 1026.
Investigation of the Magnetization of a Structure for Modelling of Magnetodielectrics, M. N. Gregor'ev and I. M. Kirko – 1463.
Periodic Remagnetization Noises in Ferromagnets, F. V. Bunkin – 1735.
Statistical Nature of Remagnetization in Ferromagnets, F. V. Bunkin – 1727.

Fluid Dynamics

Effect of Free Convection on the Coefficient of Resistance of a Plate with a Laminar Flow Regime in the Boundary Layer, A. A. Tanaev – 2477.
Heat Problems for a Laminary Stream Spreading Along a Wall, L. A. Vulis and A. T. Trofimenko – 2616.
Investigation of the Dependence of Critical Heat Flow on the Rate of Circulation, L. S. Sterman, N. G. Stiushin and V. G. Morozov – 2250.
Measurement of Pitching Moment Derivatives by a Self-Excited Oscillation Method, N. I. Akatnov and Iu. I. Sabaitis – 1986.
Motion of a Laminar Twisting Stream of Incompressible Fluid Along the Surface of a Cone, L. A. Vulis and V. P. Kashkarov – 2612.
Some Investigations of the Hydrodynamics of Jets of Liquid Issuing from a Nozzle at Pressures up to 1500 Atmospheres, L. F. Vereshchagin, A. A. Semerchan, A. I. Firsov, V. A. Galaktionov and F. M. Filler – 2484.
Use of the Gas-Hydraulic Analog for the Study of Gas Dynamics, B. G. Broude – 1538.
Vortical Trail of a Thick Wing of Finite Aspect Ratio Oscillating Harmonically with a Large Amplitude, K. K. Fediaevskii and L. Kh. Bliumina – 594.

Fluid Flow, Low Speed

Problem of the Effect of Solid Impurities on the Velocity of Motion of a Free Dust-Laden Stream, A. P. Chernov – 1038.

Fracture

Kinetics of the Growth of Cracks During the Breaking of Solids, V. R. Regel – 353.
Surface Stresses in Glassware, V. L. Indenbom – 362.
X-ray Investigation of the Nature of Fracture Under Impact Loading, D. M. Vasil'ev, G. I. Margolin and S. V. Dianov – 2058.

Friction and Wear

Comparison of Friction and Electrical Conductivity of Rubber, S. B. Ratner and V. V. Lavrent'ev – 839.
Theory of Slipping and Periodic Sticking of Solid Bodies (Friction Self-Oscillation of the First Kind). I. General Condition for Occurrence of Sticking, B. V. Deriagin, V. E. Push and D. M. Tolstoi – 1291.

Liquids

Coagulation During the Atomization of a Liquid, V. F. Dunskii – 1232.
Dependence of the Kinetic Properties of Liquids and Glasses on Temperature, Pressure, and Volume, N. I. Shishkin – 1422.
Equation Generalizing Experimental Data on the Cessation of Bubble Boiling in a Large Volume of

Liquid, V. M. Borishanskii — 438.
Evaporation of Liquid Through Communicating Capillaries and the Fundamental Law of Transfer of Moisture in a Capillary-Porous Solid, V. K. Lebedeva — 1042.
Generalization of Experimental Data Concerning the Bubbling of Vapor Through Liquid, L. S. Sterman — 1479.
Model for Electroosmotic Water Level Depression, A. V. Netushil and N. M. Burdak — 1554.
Relaxation Theory of Vitrification. 1. The Solution and Investigation of the Basic Equation, M. V. Vol'kenshtein and O. B. Ptitsyn — 2138.

Luminescence
Luminophors for Color Television Based on ZnS·ZnSe, E. I. Blazhnova, A. I. Mokrintseva and V. I. Kastianova — 2690.
Studies with Luminescent Probes in the Region 500-1200 A, F. A. Butaeva and V. A. Fabrikant — 731.

Magnetism
Certain Possibilities of Measuring the Magnetic Field Intensity by Means of Hall-EMF Film Detectors Made of HgSe, HgTe and Their Solid Solutions, O. D. Elpat'evskaia and A. I. Regel' — 2350.
Magnetic Properties of Mg_2Sn, L. L. Korenblit and A. P. Kolesnikov — 924.
Study of the Topography of the Inhomogeneous Plane Magnetic Field of a Six-Pole Electromagnet, M. I. Korsunskii, Ia. M. Fogel', G. A. Bykova, L. I. Livshits, N. S. Lozovskii and A. A. Chovnik — 1192.
Upper Curie Point of Rochelle [Seignette] Salt, M. S. Kosman and A. N. Shevardin — 1407.

Mass Spectrometry
Mass Spectrometric Investigations of Activation Process in Oxide Cathodes, N. D. Morgulis and G. Ia. Pikus — 1144.
Pulsed Mass Spectroscope, E. I. Agishev and N. I. Ionov — 201.
Separation Factor of Liquid BCl_3 and Its Vapor with Respect to Chlorine Isotopes — 2323.
Temperature of the Gas in the Ion Source of a Mass Spectrometer, V. L. Tal'rose and E. L. Frankevich — 479.

Metallurgy
Calculation of the Simplest Equilibrium Diagrams for Ternary Alloys. 1. The General Equations and Their Solution Decompositions Not Involving a Phase Transition, B. Ia. Pines — 2046.
Causes of Large Plastic Deformations in the Stretching of Metal Samples with Annular Grooves, Iu. I. Likhachev — 1785.
Diffusion of Copper and Oxygen Atoms in the Formation of Cuprous Oxide Films, A. I. Andrievskii and M. T. Mishchenko — 419.
Electrical Conductivity of Certain Compounds of the Transitional Metals with Boron, Carbon and Nitrogen, and the Electrical Conductivity of Alloys of Their Compounds, G. V. Samsonov — 695.
Electrical Properties of Compounds of Bismuth with Elements of the S—Se—Te Group. 1) Electrical Properties of Bismuth Sulfide, Bi_2S_3, P. P. Konorov — 1100.
Factors Which Disturb Normal Shrinkage in the Sintering of Powdered Metals, I. M. Fedorchenko — 2006.
Factors Which Influence the Transition from White to Gray Tin, A. I. Bykhovskii — 1746.
Investigation of Ultrasonic Scattering in Metals, L. G. Merkulov — 59.
Measuring the True Surface of a Metal, S. S. Gutin, L. L. Prochakov and M. G. Serbulenko — 851.
Nature of Surface Zones Which Arise When Chromium Diffuses in Iron, G. N. Dubinin — 1315.
Sintering of Multiphase Bodies. I. The Coalescence of Heterogeneous Grains, B. Ia. Pines — 2023.
Sintering of Multiphase Bodies. II. The Sintering of Compressed Powder Mixtures. Contraction as a Function of Concentration, B. Ia. Pines and N. I. Sukhinin — 2038.
Some Laws of Mechanical Strength in Bodies Produced by Sintering Powdered Metals, B. Ia. Pines and N. I. Sukhinin — 2014.
Some Laws of the Mechanical Properties of Samples of Sintered Powdered Metals. II. Tests at High Temperatures, B. Ia. Pines and A. F. Sirenko — 2300.
Some Regularities of the Phenomena of Electric Erosion of Metals in Low-Voltage Discharge in Liquid, I. G. Nekrashevich and S. P. Mitkevich — 83.
Thermoelectric Properties of Bismuth, G. A. Ivanov and L. I. Moldevskii — 1313.

Noise
Calculation of the Coupling Capacities Between Small Objects, A. Ia. Breitbart and I. L. Liudmirskii — 1069.
Periodic Remagnetization Noises in Ferromagnets, F. V. Bunkin — 1735.

Nuclear Physics and Instrumentation
Elimination of Critical Energy in Strong-Focusing Synchrotrons, A. A. Kolomenskii — 721.
Focusing System for an Ion Accelerator, Iu. Ia. Lapitskii, I. I. Levintov, I. N. Slivkov and V. N. Shamshev — 714.
Large Rectangular Wilson Chamber, I. L. Ivanovskaia and A. G. Novikov — 206.

Passage Through the Critical Energy Point in an Accelerator with Intense Focusing, A. A. Kolomenskii and L. L. Sabsovich – 555.
Production of Secondary Ions from Tantalum and Nickel Bombarded by Positive Cesium Atoms, V. I. Veksler and M. B. Ben'laminovich – 1626.
Properties of Plastic Scintillation Phosphors, M. M. Koton – 1687.
Theory of Betatron Oscillations of Particles in Magnetic Systems, I., A. A. Kolomenskii – 1900.
Theory of Betatron Oscillations of Particles in Magnetic Systems, II., A. A. Kolomenskii – 1911.
Vertical Focusing in a Spiral β-Spectrometer, V. S. Shpinel' and O. Sh. Grois – 2191.

Nuclear Reactor

Angular Distribution of Neutrons in the Reaction $T(p,n)He^3$, G. V. Gorlov, B. M. Gokhberg, V. M. Morozov and V. A. Shigin – 694.

Optical Properties

Article by F. Nechai "On the Possibility of Measuring Refractive Indices of Crystalline Bodies by Means of an Abbe Refractometer" – 1803.
Article by F. Nechai "On the Possibility of Measuring Refractive Indices of Crystalline Bodies by Means of an Abbe Refractometer" – 2068 L.
Concerning Illumination Sources for the Exact Determination of the Color of Nonluminous Objects, G. N. Rautian, N. V. Lobanova and M. A. Znamenskaia – 193.
Constancy of the Spectral Characteristics of Oxygen-Cesium and Antimony-Cesium Vacuum Photocells, V. S. Khazanov and S. G. Iurov – 1141.
Dynamic Birefringence in Solutions of High Molecular Polystyrene Fractions, V. N. Tsvetkov and S. M. Savvon – 342.
Effect of Temperature on the Photoconductivity of Polycrystalline Sheets of HgI_2, D. V. Chepur and O. A. Red'ka – 534.
Integral Absorption Coefficient of Solar Radiations for Certain Materials and Coatings, E. M. L'vova and G. S. Moroz – 836.
Investigation of Diffuse Reflection by Means of Polarized Light, I., A. P. Ivanov and A. S. Toporets – 598.
Investigation of Diffuse Reflection by Means of Polarized Light, II., A. P. Ivanov and A. S. Toporets – 605.
Measurement of Temperature at High Pressure by Radiation and Certain Optical Effects in Gases, Ia. A. Kalashnikov and L. F. Vereshchagin – 1749.
Measurement of the Indices of Refraction of Thin Films of Zinc Sulfide and Cryolite, I. N. Shklirevskii and A. N. Riazanov – 634.
On the Article "Illumination Sources for Exact Determination of the Color of Nonluminous Objects" – 233 L.
Optical Properties of Compound Interference Light-Filters, K. D. Sinel'nikov, I. N. Shklirevskii and N. A. Vlasenko – 89.
Photoconductivity and the Emission and Absorption of Light in Crystals of HgI_2, E. F. Gross, A. A. Kaplianskii and B. V. Novikov – 674.
Photoelastic Effect in Polystyrene and Its Halogen Derivatives, N. M. Bazhenov, M. V. Vol'kenshtein, Iu. Ia. Gotlib and L. D. Rozenshtein – 1677.
Possibility of Measuring the Refractive Index of a Crystalline Body with an Abbe Refractometer, F. Nechai – 423.
Square Light Pulses from a Glow Discharge, Iu. K. Barsukov – 458 BC.

Optics

Molds for Glass Cones for Kinescopes with Rectangular Screens Which Can be Produced by a Centrifugal Process, V. Ia. Savel'ev – 615.
Optical Method of Investigation of Averaged Stressed States in Small-Grained Polycrystals, I. Preparation of Small-Grained Polycrystal Specimens of Silver Chloride, R. A. Zhitnikov and A. V. Stepanov – 754.
Optical Method of Investigation of Averaged Stressed States in Small-Grained Polycrystals. II. Photoelastic Effects in a Crystal of the Cubic System Under Plane Loading, R. A. Ahitnikov and A. V. Stepanov – 762.
Optical Method of Investigation of Averaged Stressed States in Small-Grained Polycrystals. III. Photoelastic (Piezooptical) Properties of Polycrystalline Silver Chloride, R. A. Zhitnikov and A. V. Stepanov – 769.
Resolving Power of the Eye, M. Kornfel'd – 434.
Transmission of Polarized Light Through a Medium with Standing Ultrasonic Waves, A. M. Bonch-Bruevich – 428.

Phase Transformations

Question of the Phase Relations at the Boundary Between a Dielectric and a Metal, I. N. Shklirevskii – 327.

Plastic Deformation

Causes of Large Plastic Deformations in the Stretching of Metal Samples with Annular Grooves, Iu. I. Likhachev – 1785.
Remarks Concerning the Effect of Plastic Deformation in Monocrystals of Alkali-Halide Salts on Their Electrical Strength, A. A. Vorob'ev – 322.
Study of Stresses in Silver Chloride Crystals When

They Are Subjected to Elastic-Plastic Inflection, B. A. Kuznetsov – 1570.

Polymers

Dynamic Birefringence in Solutions of High Molecular Polystyrene Fractions, V. N. Tsvetkov and S. M. Savvon – 342.

Electrical Properties and the Structure of Organo-Silicon Polymers, K. A. Andrianov and G. E. Golubkov – 1642.

Internal Rotation in Polymer Chains and Their Physical Properties IV. Theory of Melting for Polymer Crystals, M. V. Vol'kenshtein – 2217.

Investigation of Crystallinity of Some Polymers by Infrared Spectroscopy, E. I. Pokrovskii and I. P. Kotova – 1417.

Investigation of the Dielectric Polarization and Losses of Polytrifluorochlorethylene, G. P. Mikhailov and B. I. Sazhin – 1670.

Mechanical and Electrical Losses of Polyisobutylene, S. P. Kabin and G. P. Mikhailov – 493.

On the Dynamic Mechanical Properties of Polyethylene and Polytetrafluoroethylene, S. P. Kabin – 2542.

Permeability of Polyorganosiloxane Resins, S. A. Reitlinger, A. S. Maslennikova and I. S. Iarkho – 2467.

Photoelastic Effect in Polystyrene and Its Halogen Derivatives, N. M. Bazhenov, M. V. Vol'kenshtein, Iu. Ia. Gotlib and L. D. Rozenshtein – 1677.

Study by the Method of Dielectric Losses of the Dependence on Concentration of the Relaxation Time in Copolymers, G. P. Mikhailov and L. V. Krasner – 1684.

Radiation Effects in Solids

Formation of Crystal Lattice Defects in Germanium by Fast-Electron Bombardment, V. S. Vavilov, L. S. Smirnov, G. N. Galkin, A. V. Spitsyn and V. M. Patskevich – 1805.

Investigation of the Electric Conductivity of Insulating Materials Before, During, and After Irradiation, I. M. Rozman and K. G. Tsimmer – 1634.

Mechanism of Pulse Formation in Semiconducting Crystal Counters, (Motion of Charge on Pulse Ionization in Semiconductors), S. M. Ryvkin – 2580.

Properties of Cadmium Sulfide Photoresistances irradiated by γ- and β-Rays, S. V. Svechnikov – 1601.

Properties of Plastic Scintillation Phosphors, M. M. Koton – 1687.

Radiation from a Spherical Source When Self-Absorption Occurs, M. A. Bak, K. A. Petrzhak, and Iu. F. Romanov – 372.

Use of $CaSO_4$ · Mn for Dosimetry, B. M. Nosenko, L. S. Revzin and V. Ia. Iaskolko – 1983.

Rheology

Motion of Newtonian Liquid Between Rotating Coaxial Cylinders in the Presence of Thermal Processes Affecting the Viscous Properties, T. Ia. Gorazdovskii and S. A. Regirer – 1493.

Nature of Aftereffect in Metals, D. M. Vasil'ev – 1328.

Plastic Aftereffect in Metals, D. M. Vasil'ev and L. S. Evlashin – 1322.

Various Factors Which Affect the Strength of Glass Fibers, G. M. Bartenev and A. N. Bovkumenko – 2424.

Semiconductor Devices

Breakdown of Electron-Hole Junctions in Germanium by Impulse Voltage, A. P. Shotov – 1591.

Certain Possibilities of Measuring the Magnetic Field Intensity by Means of Hall-EMF Film Detectors Made of HgSe, HgTe and Their Solid Solutions, I. D. Elpat'evskaia and A. I. Regel' – 2350.

Direct Voltage-Current Characteristic of a Plane Rectifier with Large Currents, E. I. Rashba and K. B. Tolpygo – 1388.

Electron Microscope Investigation of the Sub-Electrode Layer of a Selenium Rectifier with a Cadmium Electrode, V. A. Dorin and D. N. Nasledov – 279.

Frequency-Changing Direct Current Amplifier, Which Uses the Change in the Resistance of a Semiconductor in a Magnetic Field, V. N. Bogomolov – 2397.

Investigation of the Rectifying Properties of Selenium-Tin Sulfide or Selenium-Tin Selenide Electron-Hole Transitions, V., R. Grimm and D. N. Nasledov – 687.

Investigation of the Resistivity Variation of Germanium in a Magnetic Field, V. I. Stafeev and V. M. Tuchkevich – 268.

Measurement of the Humidity of the Air by Means of Semiconducting Thermocouples, N. V. Kolomoets, M. S. Stamzas, L. S. Stil'bans and N. P. Fateev – 662 BC.

Mechanism of Pulse Formation in Semiconducting Crystal Counters (Motion of Charge on Pulse Ionization in Semiconductors), S. M. Ryvkin – 2580.

Operation of Selenium Rectifiers at Audio Frequencies, I. G. Nekrashevich – 540.

Operation of a Transistor Amplifier in the Egression Mode, V. I. Stafeev, V. M. Tuchkevich and N. S. Iakovchuk – 11.

p-Type Silicon Converters of Solar Energy, Iu. P. Maslakovets, S. A. Poltinnikov, G. B. Dubrovskii and V. K. Subashiev – 2316.

Solid Solutions Bi_2Te_3–Bi_2Se_3 as a Material for Thermoelements – 2318 L.

Some New Types of Devices Using Semiconductors (A New Application of the Hall Effect), V. N. Bogomolov – 669.

Some Properties of Gold-Doped Germanium Diodes, A. A. Lebedev, V. I. Stafeev and V. M. Tuchkevich – 2071.

Semiconductors

Arsenoselenides of Gallium, N. A. Goriunova and V. S. Grigor'eva – 2094.

Connection with the Article by K. B. Tolpygo and I. G. Zaslavskaia "Bipolar Diffusion in Semiconductors at Large Currents" [Journal of Technical Physics (USSR) 25, 955 (1955)] – 2065.

Determination of Gaseous Micro-Impurities in the Surface Layers of Germanium, S. M. Fainshtein and V. I. Fistul' – 2099.

Diffusion of Current Carriers in a Semiconductor in the Presence of an External Electrical Field, E. I. Rashba – 1384.

Diffusion of Impurities in Germanium (Experimental Review), B.I. Boltaks-443

Diffusion of Lead in Lead Telluride, B. I. Boltaks and Iu. N. Mokhov – 2366.

Dipole Moments of Dielectric and Semiconducting Particles, D. V. Kuz'min – 1817.

Drift of Current Carriers Which Have Been Formed by the Effect of a Strong Electric Field, Iu. K. Pozhela – 277.

Effect of Admixtures Upon the Electrical Conductivity of Nonlinearity of Carborundums, L. I. Ivanov and V. I. Pruzhinina-Granovskaia – 216.

Effect of Impurities on the Electrical Properties of Lead Telluride, T. L. Kovalchik and Iu. P. Maslakovets – 2337.

Electrical Properties of Bismuth Chalcogens. II. Electrical Properties of Bismuth Selenide Bi_2Se_3, P. P. Konorov – 1365.

Electrical Properties of Bismuth Chalcogens. III. Electrical Properties of Bismuth Telluride (Bi_2Te_3), P. P. Konorov – 1371.

Electrical Properties of InAs, D. N. Nasledov and A. Iu. Khalilov – 248.

Electrical Properties of InSb, D. N. Nasledov and A. Iu. Khalilov – 3.

Emission Capability of an Abrupt p-n Transition and Its Effect Upon the Conductivity of a Semiconductor, K. B. Tolpygo – 287.

Formation of Crystal Lattice Defects in Germanium by Fast-Electron Bombardment, V. S. Vavilov, L. S. Smirnov, G. N. Galkin, A. V. Spitsyn and V. M. Patskevich – 1805.

Graphical Method of Determination of the Chemical Potential [Fermi Level] of Semiconductors, L. I. Korenblit and A. A. Shteinberg – 912.

Influence of Impurities on Lifetime of Excess Charge Carriers in Germanium, A. V. Rzhanov – 1360.

Kinetics of Bipolar Photoelectromotive Force in a Semiconductor with Metallic Electrodes, E. I. Kaplunova and K. B. Tolpygo – 2102.

Measurement of the Lifetime, Diffusion Coefficient, and Rate of Surface Recombination for Nonequilibrium Current in a Thin Semiconductor Specimen, O. V. Sorokin – 2390.

Measurement of Rate Recombination of Carriers by Conductivity Modulation, K. D. Glinchuk, E. G. Miseliu and E. I. Rashba – 2521.

Measurement of Surface Recombination Rates in Thin Semiconductor Specimens with Qualitatively Different Boundaries, O. V. Sorokin – 2384.

Nernst-Ettingshausen Effect in Germanium, R. I. Bashirov and I. M. Tsidil'kovskii – 2129.

Problem of the Effect of a Strong Field of Semiconductors, Iu. K. Pozhela – 273.

Problem of the Effective Mass of Electrons and Holes in Germanium, Z. Kopets – 2369.

Problem of the Faraday Effect in Semiconductors, M. I. Klinger and M. M. Chaban – 921.

Problem of the Rational Determination of the Mobility of Current Carriers in Semiconductors, T. A. Kontorova – 646.

Properties and Structure of Ternary Semiconductive Systems. III. Conductivity and Photoconductivity in Systems of Sulfides of Thallium, Antimony and Bismuth, N. A. Goriunova, B. T. Kolomiets and A. A. Mal'kova – 1583.

Properties of Cadmium Sulfide Photoresistances Irradiated by γ- and β-Rays, S. V. Svechnikov – 1601.

Puncture of Transition Layers in Semiconductors, B. M. Vul – 2325.

Question of Surface Recombination, V. L. Bonch-Bruevich – 1111.

Recombination of Electrons and Holes When Various Types of Traps are Present, S. G. Kalashnikov – 237.

Relationship of Surface and Volume Recombination in Germanium Triodes with Fused-In Electron-Hole Transistions, A. O. Rzhanov – 235 L.

Remarks on the Article by G. E. Pikus and Iu. A. Firsov [1], V. L. Bonch-Bruevich – 1343 L.

Remarks on the Letter of Gubanov and Makovskii in Connection with the Work of Tolpygo and Zaslavskaia "Bipolar Diffusion in Semiconductors at Large Currents" – 2066.

So-Called "Secondary" and "Through" Photocurrent in Semiconductors, S. M. Ryvkin – 2357.

Steady-State Distribution of Excess Charge Carriers in Partially Illuminated Germanium, S. V. Bogdanov – 903.

Surface Conductivity and Surface Recombination in Germanium Specimens, A. V. Rzhanov, I. G. Neizvestnyi and V. V. Rosliakov – 2081.

Technique of Measuring the Coefficient of Thermal EMF in Semiconductors, G. I. Skanavi and A. M. Kashtanova – 882.

Temperature Dependence of the Spectral Distribution of Photoconductivity in Gallium Selenide and Gallium Telluride, S. M. Ryvkin and R. Yu. Khansevarov – 2688.

Thermo- and Galvanomagnetic Effects in Semiconductors, Taking into Account the Variation in the Concentration of Current Carriers, I. Thermo- and Galvanomagnetic Effects in Weak Fields, G. E. Pikus – 17.

Thermo- and Galvanomagnetic Effects in Semiconductors, Taking into Account Variations in the Concentration of Current Carriers, II. Galvanomagnetic Effects in Strong Fields. Electron and Phonon Thermal Conductivity, G. E. Pikus – 32.

Theory of $A^{III}B^{V}$-Type Semiconductors, A. I. Gubanov – 2107.

Theory of the Hall and Nernst Effects in Semiconductors with Impurity Zones, M. I. Klinger, V. G. Novikova and V. N. Agarkova – 2120.

Theory of the Metal-Semiconductor Contact, S. U. Umarov and L. G. Gurvich – 2115.

Shock Waves

Dependence of the Pressure at the Front of a Shock Wave Upon the Steepness of the Energy-Pulse Front When an Electrical Discharge Takes Place in a Liquid, A. S. Zingerman – 2454.

Sound Waves

Causes of Sound Streaming and the Role of the Sound Pressure Gradient – 2321.

Effect of Intensity of Oscillation on the Form of Acoustical Streaming, P. N. Kubanskii – 1240.

Experimental Investigation of Spherical Detonation of Gases, Ia. B. Zel'dovich, S. M. Kogarko and N. N. Simonov – 1689

Investigation of Ultrasonic Scattering in Metals, L. G. Merkulov – 59.

One Error in the Theoretical Analysis of Ferroresonant Phenomena at a Frequency Equal to One-Third of the Frequency of the Coercive Force, A. N. Vakhrameev – 1802.

Swelling of a Liquid Surface Under the Influence of Ultrasound, M. Kornfeld and V. I. Triers – 2685.

Theory of the Microphone Chamber in a Veingerov Spectrophone and of an Optical Acoustical Gas Analyzer, A. O. Sall – 152.

Transmission of Polarized Light Through a Medium with Standing Ultrasonic Waves, A. M. Bonch-Bruevich – 428

Wave Motion on Layered Flow Surface in Horizontal Pipes, M. A. Mologin – 1768.

Space Charge

Electron Capture and Ionization in the Interaction of Singly-Charged Positive Ions with Gas Atoms, N. V. Fedorenko, V. V. Afrosimov and D. M. Kaminker – 1861.

Spectra and Spectroscopy; Gas Analysis

Adsorption Spectrum and a Study of Excitons in Cadmium Selenide Crystals, E. F. Gross and V. V. Sobolev – 1580.

Application of Spectral Analysis in Investigation of Vapor Phase Produced in Electric Spark Treatment of Metals, L. S. Palatnik and A. N. Liulichev – 825.

Investigation of Crystallinity of Some Polymers by Infrared Spectroscopy, E. I. Pokrovskii and I. P. Kotova – 1417.

Photoelectric Recording of Raman Spectra from Gases, V. M. Pivovarov and Ia. S. Bobovich – 624.

Problem of the Principle of Action of Alpha-Ionization Gas Analyzers, N. I. Shteinbok – 170.

Structure of the Spectral Curve for the Internal Photoeffect in Crystals of Cadmium Sulfide, E. F. Gross, A. A. Kaplianskii and B. V. Novikov – 900.

Theory of the Microphone Chamber in a Veingerov Spectrophone and of an Optical Acoustical Gas Analyzer, A. O. Sall – 152.

Surface Properties

Investigation of the Surface Work-Function Distribution for Oxide Cathodes, D. G. Bulyginskii and L. N. Dobretsov – 1115.

Nature of Surface Zones Which Arise When Chromium Diffuses in Iron, G. N. Dubinin – 1315.

Question of Surface Recombination, V. L. Bonch-Bruevich – 1111.

Surface Ionization of Molecules of Potassium Chloride and Cesium Chloride in an Electric Field, N. I. Ionov – 2134.

Surface Migration of Tungsten Atoms in an Electric Field, I. L. Sokol'skaia – 1147.

Surface Structure of Thin Layers of PbS Obtained by Vaporization in a Vacuum, R. Ia. Berlaga, M. I. Rudenok and L.P. Strakhov – 1.

Thermal Conductivity and Thermal Conduction; Heat Transfer

Analysis of the "Double-Biot Number Method" of Determining the Thermal Constants of Metals and Insulators, E. Iu. Nekhendzi – 1798.

Certain Concepts Concerning the Procedure for Calculating Heat Exchange and Hydraulic Resistance of High-Velocity Gas Flow, P. V. Dvornichenko – 1531.

Critical Point in Heat Removal from Boiling Water Flowing Through an Annular Gap, V. S. Chirkin and V. P. Iukin – 1503.

Determination of the Coefficient of Thermal Conductivity of Loose Materials by the Mal'mgren-Shuleikin Method, L. A. Vulis, N. D. Kosov and V. A. Potseluiko – 78.

Determination of the Temperature Function for the Coefficient of Thermal Conductivity, L. A. Vulis and V. A. Potseluiko – 70.

Determination of the Time Necessary to Heat Long Articles in Convection Furnaces, A. A. Neustruev – 1516.

Effect of Thermal Conductivity Upon the Electrical Erosion of Metals, A. S. Zingerman – 1945.

Experimental Determination of the Thermal Conductivity of Liquid Oxygen, N. V. Tsederberg and D. L. Timrot – 1791.

Heat and Mass Transfer in a Granular Layer, I., M. E. Aerov and N. N. Umnik – 1203.

Heat and Mass Transfer in a Granular Layer, II. M. E. Aerov and N. N. Umnik – 1212.

Heat Transfer by Transverse Flow of a Two-Phase Stream Over a Hot Cylindrical Tube, R. Z. Alimov – 1264.

Heat Transfer in Tubes with Packing, B. N. Vetrov and O. M. Todes – 782.

Nonstationary Heat Conduction in Solids Bounded by Orthogonal Coordinate Surfaces, II. Temperature Fields that Depend on a Single Coordinate, M. G. Kogan – 1486.

Problem of Utilizing the Method of an "Instantaneous" Heat Source for Determining the Thermal Characteristics of Heat Insulators, M. A. Kaganov – 650.

Question of Effective Radiation Temperature, V. I. Pukhov – 145.

Temperature Dependence of Water Vapor Heat Conductivity, N. B. Vargaftik and E. V. Smirnova – 1221.

Thermal Conductivity of Technical Materials at Low Temperatures, N. V. Zavaritskii and A. G. Zel'dovich – 1970.

Thermal Expansion and Thermal Conductivity of Some Crystals, T. A. Kontorova – 1959.

Thermo- and Galvanomagnetic Effects in Semiconductors, Taking into Account Variations in the Concentration of Current Carriers. II. Galvanomagnetic Effects in Strong Fields. Electron and Phonon Thermal Conductivity, G. E. Pikus – 32.

Thermohygrometric Methods of Determining the Vapor Concentration in a Surface Layer, N. F. Dokuchaev – 2272.

Transient Heat Conduction in Solid Bodies Bounded by Orthogonal Coordinate Surfaces. 1. Three-Dimensional Temperature Field, M. G. Kogan – 1155.

Thermodynamic Properties and Thermodynamics

Condensation of Vapor Mixtures in Deep Cooling, G. P. Golovinskii – 1281.

Condensation of Water Vapor from a Steam and Air Mixture in a Vacuum, V. A. Rachko – 564.

Experimental Study of the Effect of Speed and Composition of a Steam and Air Mixture and of the Height of Vacuum on Heat Emission During the Condensation of Water Vapor, V. A. Rachko – 579.

Experimental Verification of the Applicability of a Cooling Machine to the Heating and Cooling of Buildings in Conjunction with the Work of a Hydroelectric Station, L. M. Rosenfel'd, V. V. Onosovskii and G. S. Serdakov - 1975.

Fog Formation at High Pressures, I. P. Krichevskii and N. E. Khazanova – 413.

Generalization of Experimental Data Concerning the Bubbling of Vapor Through Liquid, L. S. Sterman – 1479.

Investigation of the Thermodynamical Properties of Air and Nitrogen at High Pressures and Low Temperatures. I. The Isothermal Joule-Thomson Effect for Air and Nitrogen, I. P. Ishkin and M. G. Kaganer – 2255.

Investigation of the Thermodynamical Properties of Air and Nitrogen at High Pressures and Low Temperatures. II. Thermodynamical Phase Diagrams of Air and Nitrogen, I. P. Ishkin and M. G. Kaganer – 2263.

Some Thermodynamic Properties of a Solid Body at High Temperatures, K. P. Rodionov – 368.

The i-d Diagram of Oxygen, S.M. Rips - 2648.

Thermoelectricity

Conversion of Radiation into Electricity, V. B. Veinberg and Iu. V. Mal'tsev – 2295.

Investigation of the Peltier Effect and Thermoelectric Power in Germanium, M. Shtenbek and P. I. Baranskii – 659.

Methods for Precision Measurement of the Peltier Effect and the Thermoelectric Power, M. Shtenbek and P. I. Baranskii – 1345.

p-Type Silicon Converters of Solar Energy, Iu. P. Maslakovets, S. A. Poltinnikov, G. B. Dubrovskii and V. K. Subashiev – 2316.

Solid Solutions Bi_2Te_3–Bi_2Se_3 as a Material for Thermoelements – 2318.

Thermoelectric Convection, A. G. Ostroumov and G. A. Ostroumov – 610.

Thermoelectric Microrefrigerators, E. K. Iordanishvili and L. S. Stil'bans – 466.

Thermoelectric Microcoolers, E. K. Iordanishvili and L. S. Stil'bans – 928.

Thermoelectric Properties of Bismuth, G. A. Ivanov and L. I. Mokievskii – 1313.

Thermoelectric Properties of Cd-Sb Alloys, V. A. Iurkov and N. E. Alekseeva – 898.

Two New Applications of the Peltier Effect, A. F. Ioffe – 462. BC.

Thin Films

Measurement of the Indices of Refraction of Thin Films of Zinc Sulfide and Cryolite, I. N. Shklarevskii and A. N. Riazanov – 634.

Problem of the Electron Diffraction Study of the Texture of Layers Obtained by Evaporation in Vacuum, M. A. Rumsh and Iu. G. Baklagina – 1459.

Surface Structure of Thin Layers of PbS Obtained by Vaporization in a Vacuum, R. Ia. Berlaga, M. I. Rudenok and L. P. Strakhov – 1.

Transmission Lines and Wave Guides

Concerning the Theory of Nonuniform Transmission Lines, S. I. Orlov – 2284.

Electromagnetic Surface Waves Guided by Small-Curvature Boundaries, M. A. Miller and V. I. Talanov – 2665.

Propagation of Electromagnetic Waves Along a Waveguide Containing a Helix and Partially Filled with Dielectric, V. P. Shestopalov – 2659.

Skin Effect in Conductors with Rectangular Cross Sections, L. A. Tseitlin – 2679.

Turbulence

Propagation of a Turbulent Gas Jet in a Medium with a Different Density, L. A. Vulis and N. N. Terekhina – 1249.

Vacuum Technique

Certain Features of Dynamic Vacuum Systems, A. L. Mints and N. M. Kristi – 1760.

Theory of the Ionization Gauge, L. P. Khavkin – 2279.

Vibrations

External Dry Friction When the Frictional Body Oscillates as a Whole, G. D. Lomakin – 843.

Frictional Self-Excited Vibrations, N. F. Bessarab – 95.

Viscosity and Viscoelasticity

Anomalous Viscous Fluid Flow Between Two Plates and Between Two Coaxial Cylinders, N. V. Tiabin – 1929.

Free Heat Convection in Metallic Vertical Tubes of Circular Section, V. V. Slavnov – 1938.

Heat Exchange During Boiling of Liquids in Narrow Annular Tubes, I. I. Chernobyl'skii and Iu. M. Tananaiko – 2244.

Heat Exchange in Condictions of Free Laminary Movement of Gas with Variable Viscosity at a Vertical Wall, A. A. Tanaev – 2621.

Motion of Newtonian Liquid Between Rotating Coaxial Cylinders in the Presence of Thermal Processes Affecting the Viscous Properties, T. Ia. Gorazdovskii and S. A. Regirer – 1493.

Unsteady Heat Convection Near a Horizontal Cylinder, G. A. Ostroumov – 2627.

X-rays and X-ray Diffraction

Absorption of Betatron Bremsstrahlung by a Double Layer Absorber, A. N. Orlov and G. V. Fedorov – 1926.

Criticism of Williamson and Smallman's Article on the Use of Fourier Analysis for the Interpretation of Broadened Lines in X-ray Patterns of Cold-Worked Iron and Molybdenum [1], B. Ia. Pines – 2308.

Determination of Interatomic Distances from the Radial Distribution Curves of Scattered X-rays, V. N. Filipovich – 409.

Ionization X-ray Structure Investigation of Bismuth Telluride, F. I. Vasenin and P. F. Konovalov – 1376.

Measurement of Macrostresses by X-ray Diffraction, D. M. Vasil'ev – 2310.

Method of X-ray Study of Polycrystalline Specimens Possessing Texture, D. M. Vasil'ev – 671.

New Method for the X-ray Investigation of the Structure of Radioactive Materials, S. T. Konobeevskii, B. M. Levitskii and Iu. A. Martyniuk – 856.

New X-ray Chambers for the Investigation of the Fine Structure of Polycrystalline Materials, S. O. Tsobkallo – 210.

Powder Patterns with Variable Radius, G. A. Efendiev – 621.

Precision Determination of Polycrystal Lattice Parameters with a Back-Reflection X-ray Camera of High Resolving Power, M.A. Gurevich and B.F. Ormont – 1081.

Spatial Distribution of Radiation from a 10-Mev Betatron, V. A. Moskalev – 2508.

Stereobetatron, V. A. Moskalev – 1998.

Theory of the Scattering of X-rays at Small Angles, V. N. Filipovich – 391.

X-ray Investigation of the Nature of Fracture Under Impact Loading, D. M. Vasil'ev, G. I. Margolin and S. V. Dianov – 2058.

ERRATA, SOVIET PHYSICS – TECHNICAL PHYSICS, VOL. 1, 1956

No. 1

Page	Line	Reads	Should read
1	6	. . . a layer of sulfurous lead;	. . . a layer of lead sulfide.
3	last line	. . . the measurements were confined to 1.3°K.	. . . the measurements were extended down to 1.3°K.
26	line 2 from bottom	Any considerably stronger diffusion effects must affect the dependence of $\bar{\sigma}$ upon H	Diffusion effects should have a much greater influence on the dependence of $\bar{\sigma}$ on H.
28	line 19	. . . $\frac{1}{l_H}$ is appreciable at $\frac{1}{l_T} = A \frac{dT}{dy}$.	. . . $\frac{1}{l_H}$ is replaced by $\frac{1}{l_T} = A \frac{dT}{dy}$.
57	line 23	Or, if lithium pairs are introduced into an antimony layer. . . .	Or, if an antimony layer is treated with lithium vapor . . . .
57	line 2 from bottom	. . . the elasticity of lithium vapor . . .	. . . the vapor pressure of lithium . . .
202	34, 35	. . . diodes . . .	. . . dynodes . . .

No. 2

287	line 7, onward	. . . non-basic carriers . . .	. . . minority carriers . . .
	21	. . . Ziener effect . . .	. . . Zener effect . . .
332	14	. . . admitted the error, considering them lowered by one.	. . . made the mistake of supposing they were reduced by unity.
341	[3]	J. J. Tomson . . .	J. J. Thomson . . .
	[4]	L. Leb . . .	L. Loeb . . .
371	[6]	J. Barden . . .	J. Bardeen . . .
	[7]	Sterngeimer . . .	Sternheimer . . .
378	[2]	St. Meuer . . .	St. Meyer . . .
381	17	. . . special points . . .	. . . singular points . . .
385	line 9	. . . the diameters of the comb structure . . .	. . . the dimensions of the comb structure . . .

Page	Line	Reads	Should read
391	line 13	. . . Babinier . . .	. . . Babinet . . .
	line 22	. . . ($l_{\text{lim}} \ll L$) . . .	. . . ($l_{\text{boundary}} \ll L$) . . .
402	line 5	. . . but because this integral is a function of $\underline{s}$ . . .	. . . but, as a function of $\underline{s}$, this integral . . .
407	line 2 from bottom	. . . inverse lattice node (this intensity is determined by the vector $\mathbf{k}$ . . .	. . . reciprocal lattice determined by the vector $\mathbf{k}$ . . .
No. 3			
514	lines 1, 4	. . . Matier . . .	. . . Mathieu . . .
514	line 3	. . . intrinsic values . . .	. . . eigenvalues . . .
516	[4]	MacLaughlan, Theory and Application of Matier Functions	McLachlan, Theory and Applications of Mathieu Functions
562	line 13	. . . a singular relationship . . .	. . . a single-valued relation . . .
No. 4			
745	last line and top of 748	Although it might be expected that the irregular surface of the twisted conductor should have a strong effect on the corona starting voltage, in point of fact it is found that both characteristics are quite similar; calculations of the appropriate electric fields [3] show that it is the weak-field region which determines the value of the corona current.	The agreement between the characteristics is due to the fact that the twisted surface of the conductor has a strong effect on the corona starting voltage, but, as has been shown by calculations of the corresponding electrostatic field [5], has no effect on the weak field which determines the corona current.
748	lines 16 and 17	Hence the only difference in the voltage-current characteristics of split and solid conductors is the difference in the corona starting voltage.	Hence the only difference in the voltage-current characteristics of split and solid conductors is the difference in the corona starting voltage (for small distances between components of the split conductor).
811	last 2 lines	It should be noted that in the case when $\eta_0 \gg 1$ and the equation $\mathrm{Th}^2 \frac{\pi}{2} \eta_0 \simeq 1 - 4e^{-\pi \eta_0}$, can be simplified and acquires the form	It should also be noted, that in the case where $\eta_0 \gg 1$ and the approximate equation $\tanh^2 \pi/2\, \eta_0 \simeq \simeq 1 - 4e^{-\pi \eta_0}$ can be used, the formula (12) is simplified and acquires the nature
813	line 11	. . . Ritts method . . .	. . . Ritz method . . .
817	[3]	E. Ianke	E. Jahnke . . .
No. 5			
968	[4]	. . Rossi and Shtaub . . .	. . . Rossi and Staub . . .
993	line 8	. . . for a column which is finite in diameter . . .	. . . for the final diameter of the column . . .
	line 13	. . . in a column with finite diameter there is found an exponential dependence . . .	. . . the final diameter of the column has a power-law dependence . . .

ERRATA (Continued)

Page	Line	Reads	Should read
994	line 13	In the second case, with a plate having a hole diameter 0.5 mm, the current is some 6% greater.	The current in the latter case is 6% greater than with a plate of hole diameter 0.5 mm.
998	line 26	The nonequilibrium is conditioned by the final speed of loading.	The nonequilibrium is due to the finite speed of loading.
1000	line 2	... setting down the integral function...	. . . representing the integrand . . .
1001	line 4	. . . the appearance of the stress tensor will also depend on the relaxation processes.	. . . the form of the stress tensor will also affect the relaxation processes.
	line 21	. . . where σ^* is the stress over the elapsed time for the relaxation.	. . . where σ^* is the stress at the end of one relaxation period.
1003	line 18	In this case the nonintrinsic integral obtained after integration of Eq. (2) comes down to . . .	In this case the improper integral obtained from integration of Eq. (2) reduces to . . .
1007	lines 1, 2	. . . ϵ . . .	. . . $\dot{\epsilon}$ . . .
	line 21	. . . τ_g . . .	. . . τ_g . . .
No. 6			
1133	[18]	K. Herring . . .	C. Herring . . .
1164	[13]	Karslaiv and Eger . . .	Carslaw and Jaeger . . .
No. 7			
1384	line 11	. . . due to the "stretching" of the diffusion lines of nonbasic carriers [4].	. . . because of the stretching of the diffusion lengths for minority carriers [4].
1385	line 9	. . . the Green function Eq. (6) which is space dependent for the limiting conditions (7).	. . . the time-dependent Green's function of Eq. (6) for the boundary conditions (7).
	line 11	. . . single instantaneous source . . .	. . . unit instantaneous source. . .
1387	line 6	. . . in(16)dominate the first term . . .	. . . the first term in (16) is dominant . . .
	line 10	. . . the comparable magnitude has a large number of terms.	. . . a large number of terms are of comparable magnitude.
	[5]	Kh. S. Carslow, Theory of Thermal Conductivity. . .	H. S. Carslow, Theory of Heat Conduction. . .
1420	line 23	. . . reverse isometry . . .	. . . rotational isomerism . . .
	line 26	. . . reverse isomers . . .	. . . rotational isomers . . .
No. 8			
1606	last 2 lines	Here q_α comprises $\mathbf{q}$ . . .	Here q_α is the component of $\mathbf{q}$ . . .

ERRATA (Continued)

Page	Line	Reads	Should read
1611	line 3	pure liquids	true liquids
	[3]	G. Bete and A. Zommerfeld . . .	H. Bethe and A. Sommerfeld . . .
1758	[3]	D. Garrison, R. Lord and D. Lufburov	D. Harrison, R. Lord and D. Loofbourow
1759	[26] and [33]	G. Gertsberg	G. Hertzberg
	[38]	R. V. Pol', Introduction of Optic ...	R. V. Pohl, Introduction to Optics. . .
1791	line 22 and 23	. . . made it necessary for us to calculate its approximate variation theoretically.	. . . made it necessary for us to use the approximate dependence given by the theory of corresponding states.
No. 9			
1845	[12]	U. Kedi . . .	W. Cady. . .
1901	Eq. (2.5)	a =	a' =
1906	last equation	$\vartheta_0 = \vartheta_{m1} + \vartheta_{m1} + \vartheta_{m2} + \vartheta_{m_4}$	$\vartheta_0 = \vartheta_{m1} + \vartheta_{s1} + \vartheta_{m2} + \vartheta_{s2}$
1910	[16]	D. Stoker . . .	J. Stoker . . .
1925	[5]	L. M. Mili-Tomson . . .	L. M. Milne-Thomson . . .
1941	[3]	D. Kai and T. Labi . . .	D. Kaye and T. Laby. . .
1969	[11]	K. F. Gertsfel'd . . .	K. F. Herzfeld . . .
	[16]	F. Zeits. . .	F. Seitz . . .
1993	[3]	V. L. Diurend . . .	V. L. Durand . . .
1995	line 21	. . . during the course of the time . . .	. . . after the time . . .
2046	line 2	. . . decomposition of ternary alloys to binary alloys . . .	. . . decomposition of solid solutions of binary alloys . . .
2047	line 6	. . . is defined by the ratio of coefficients of the p's in (2b) . . .	. . . is the determinant of the coefficient of the p's in (2b).
No. 10			
2101	[7]	Deshman . . .	Dushman. . .
2113	[8]	F. Hand . . .	F. Hund . . .
2192	line 2	. . . the possible meaning of $\underline{n}$ . . .	. . . the possible values of $\underline{n}$ . . .
2195	line 6	. . . with zero initial velocity, its trajectory . . .	. . . with zero initial velocity, and since the limiting curve is an equipotential, its trajectory . . .
2198	line 11	The electrons of . . .	The conversion electrons of . . .

ERRATA (Continued)

Page	Line	Reads	Should read
2216	[2]	A. Rusterkhol'ts . . .	A. Rusterholz . . .
2298	Table heading, line 2	Average over two hours of operation.	Averaged over hours of operation.
No. 11			
2334	line 6 from bottom	Puncture occurs when $M - \infty$ . . .	[Puncture occurs when $M \rightarrow \infty$ . . .
2339	line 6 from bottom	. . . further, the electron concentration at $n = 7 \cdot 10^{17}$ did not depend on the quantity present.	. . . beyond this point, the electron concentration remains equal to $7 \cdot 10^{17}$, independent of the amount of lead excess.
2340	line 7	. . . and as this falls . . .	. . . and then decreases it . . .
2343	line 29	. . . were completely reproducible . . .	. . . were completely reversible . . .
2407	line 26	. . . with colloidal centers which are colored in an electric field the crystals were cooled in air.	. . . with colloidal centers, crystals colored in an electric field were cooled in air.
2455	[10]	O. D. Khvol'son . . .	O. D. Chwolson . . .
No. 12			
2557	footnote	In making approximate calculations we may substitute infinite limits in the integration over ρ in (8) for the limits E_1/p for integration over E/p (10).	In making approximate calculations we may replace the infinite limit in the ρ integration of (8) by the limit E_1/p in the integration over E/P in (10).
2558	line 7	. . . which is almost three times more than . . .	. . . which is almost one-third . . .
2565	[7]	C. Kent. . .	C. Kenty. . .
	[8]	. . . R. Zurman . . .	. . . S. Schurman . . .
2675	line 9	. . . a discontinuity . . .	. . . continuity . . .
	line 29	. . . that only one equation of (3) is sufficient . . .	. . . that Eq. (3) alone is insufficient . . .
	line 31	. . . are determined uniquely.	. . . are not determined uniquely.
2676	line 1	This statement becomes obvious if it is expressed by saying that the bounding surface Σ serves as an ideally conducting boundary of an endovibrator, excited from within by the surface magnetic current i_m.	This statement becomes obvious if we consider that the closed surface Σ acts as an ideally conducting boundary of a cavity oscillator.
2692	line 15	. . . photons . . .	. . . phonons . . .

(See also Errata in No. 5, page 1109)

SOVIET PHYSICS – TECHNICAL PHYSICS, VOL. 1, INDEX

(Index of the Journal of Technical Physics of the USSR,
Vol. 26, 1956)

CONTENTS

	Page
Analytical Author Index	1
Analytical Subject Index	13
Errata	27

SIGNIFICANCE OF ABBREVIATIONS MOST FREQUENTLY ENCOUNTERED IN SOVIET PHYSICS PERIODICALS

AN SSSR	*Academy of Sciences, USSR*
FIAN	*Physics Institute, Academy of Sciences USSR*
GITI	*State Scientific and Technical Press*
GITTL	*State Press for Technical and Theoretical Literature*
GOI	*State Optical Institute*
GONTI	*State United Scientific and Technical Press*
Gosenergoizdat	*State Power Press*
Gosfizkhimizdat	*State Physical Chemistry Press*
Goskhimizdat	*State Chemistry Press*
GOST	*All-Union State Standard*
Gostekhizdat	*State Technical Press*
GTTI	*State Technical and Theoretical Press*
GUPIAE	*State Office for Utilization of Atomic Energy*
IF KhI	*Institute of Physical Chemistry Research*
IFP	*Institute of Physical Problems*
IL	*Foreign Literature Press*
IPF	*Institute of Applied Physics*
IPM	*Institute of Applied Mathematics*
IREA	*Institute of Chemical Reagents*
ISN (Izd. Sov. Nauk)	*Soviet Science Press*
IIaP	*Institute of Nuclear Studies*
Izd	*Press (publishing house)*
KISO	*Solar Research Commission*
LETI	*Leningrad Electrotechnical Institute*
LFTI	*Leningrad Institute of Physics and Technology*
LIM	*Leningrad Institute of Metals*
LITMiO	*Leningrad Institute of Precision Instruments and Optics*
Mashgiz	*State Scientific-Technical Press for Machine Construction Literature*
MATI	*Moscow Aviation Technology Institute*
MGU	*Moscow State University*
Metallurgizdat	*Metallurgy Press*
MOPI	*Moscow Regional Institute of Physics*
NIAFIZ	*Scientific Research Association for Physics*
NIFI	*Scientific Research Institute of Physics*
NIIMM	*Scientific Research Institute of Mathematics and Mechanics*
NII ZVUKSZAPIOI	*Scientific Research Institute of Sound Recording*
NIKFI	*Scientific Institute of Motion Picture Photography*
OIIaI	*Joint Institute of Nuclear Studies*
ONTI	*United Scientific and Technical Press*
OTI	*Division of Technical Information*
OTN	*Division of Technical Science*
RIAN	*Radium Institute, Academy of Sciences of the USSR*
SPB	*All-Union Special Planning Office*
Stroiizdat	*Construction Press*
URALFTI	*Ural Institute of Physics and Technology*

NOTE: Abbreviations not on this list and not explained in the translation have been transliterated, no further information about their significance being available to us.—*Publisher.*

The expanded program of the American Institute of Physics comprises translation of four leading Soviet physics journals, as listed below. These translations, by competent, qualified scientists, provide all research laboratories and libraries with accurate and up-to-date information of the results of research in the U.S.S.R.

Soviet Physics — Technical Physics

A translation of the "Journal of Technical Physics" of the Academy of Sciences of the U.S.S.R. The translation began with the 1956 issues, and is being continued. Twelve issues per year, approximately 3,000 Russian pages. Annually $90.00 domestic, $95.00 foreign.

Soviet Physics — Acoustics

A translation of the "Journal of Acoustics" of the Academy of Sciences of the U.S.S.R. The translation began with the 1955 issues. Four issues per year, approximately 400 Russian pages. Annual price, beginning with the 1957 issues, $12.00 domestic, $14.00 foreign. Prices for each volume prior to 1957, $20.00 domestic, $22.00 foreign.

Soviet Physics — "Doklady"

A translation of the "Physics Section" of the Proceedings of the Academy of Sciences of the U.S.S.R. The translation began with the 1956 issues. Six issues per year, approximately 900 Russian pages. Annually $25.00 domestic, $27.50 foreign.

Soviet Physics — JETP

A translation of the "Journal of Experimental and Theoretical Physics" of the Academy of Sciences of the U.S.S.R. Translation began with the 1955 issues. Twelve issues per year, approximately 4,000 Russian pages. Annual price, beginning with the 1957 issues, $75.00 domestic, $79.00 foreign. Prices for back volumes may be obtained from the American Institute of Physics upon request.

Subscriptions should be addressed to the American Institute of Physics, 335 East 45th Street, New York 17, N. Y.